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AND THE JOHNS HOPKINS INSTITUTE OF THE HISTORY OF MEDICINE

Editor—HENRY E. SIGERIST
Associate Editor—GENEVIEVE MILLER

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EDITORIAL

BEGINNING A NEW YEAR

HENRY E. SIGERIST

An eventful year has come to an end, with two Victory-Days that will not be forgotten so soon. The German war machine, mortally wounded at El Alamein and Stalingrad collapsed under the hammer blows of the allied armies, and what is left of the Nazi supermen is a pitiful sight. Twice in a generation the German armies, most skillfully trained and led by the most scientific General Staff, were utterly beaten by amateur soldiers, and this should provide food for reflection. We must be particularly grateful that it was possible to defeat the Nazis with ordinary weapons, without atomic power. Otherwise, the old slogan, "Im Felde unbesiegt," would have been resuscitated without fail, and the German people would have been told that they had been beaten by trickery while their glorious armies remained undefeated. Now there can not be any doubt; the surrender was unconditional and every corner of Germany is occupied by foreign troops.

VE-Day brought a great relief, but we knew that the job was not finished, that a great power in the Far East which like an octopus was extending its tentacles over many lands, remained undefeated. Japan, however, left alone in the world, harassed by us on the sea and in the air, broke down when the Russian avalanche was unleashed and when two

small experimental bombs were dropped on Hiroshima and Nagasaki wiping out soldiers and civilians, men, women and children, animals and flowers, over wide areas, revealing a source of destructive energy against which there was no resistance.

It was a bestial war that ravaged the world for fourteen years. The Japanese soldiery beat and murdered Chinese men, raped women and looted property at a time when we were still helping them and supplying them with all the war materials they needed. In Ethiopia, Mussolini's son became ecstatic over the beauty of the clouds of smoke developing from bombs dropped over helpless Ethiopians. They were not—not yet—mushroom-shaped, but rather like the unfolding petals of the rose. In Spain, untold cruelties were committed. The human body was squeezed, torn, burned in every imaginable way that would cause pain, the most atrocious pain. And the world accepted it cheerfully and inaugurated a non-intervention policy. Then came the death-factories, Maidanek, Buchenwald, Dachau and many, many others where human beings were turned into fertilizer or soap while their shoes and underwear were sold.

We did not set up death factories. We did not torture war prisoners. On the contrary, we fed them well and kept them ideologically pure, good fascists who might carry on at home when others would be demoralized. But we were the most expert bombers. We destroyed cities wholesale, destroyed untold cultural values without which we ourselves are greatly impoverished. And we devised and used the most savage weapon the world has ever seen. Oh, I know we have been told that by wiping out half a million Japanese civilians we saved the lives of over a million American soldiers, a figure that must be slightly exaggerated in view of the fact that our total losses in World War II were somewhat over a quarter of a million lives and also in view of the fact that Japan was close to collapsing anyway.

And now? Why is it that we cannot fully rejoice, that we do not really feel at peace? First of all, because there is no peace. One phase of the war has ended and another has begun. The imperialist contest is over. In the clash between old and young imperialisms, the claims of Germany, Italy and Japan have been smashed for a long time to come. This is a most important result because fascist world domination would have been a great catastrophe. But at the present historical moment imperialism is an evil in any form whether it tends to dominate a country politically or economically, and we, therefore, must expect a long period of wars of liberation of the colonial and semi-colonial people. They are fighting already in Indo-China and Indonesia and it is foolish to believe that the

ideal of freedom has been instilled into them by the Japanese warlords. Long before the war, Indo-Chinese patriots died on the gallows singing the Marseillaise that they had learned in Paris while they were studying at the Sorbonne, and Indonesian patriots were put into concentration camps on islands by the thousands long before the war. We must expect many more wars of independence. Education has spread, and people refuse to accept servitude meekly even if the color of their skin happens to be different from ours.

There are a few things that we should learn. We should learn that " self-government " and " independence " are two different concepts and that people who want to be independent are not satisfied with a self-government that leaves them dependent. We should learn that we cannot establish an International Office of Education pledged to spread the ideals of freedom and democracy and at the same time fight the people who respond to this education and accept its ideals. We should not be astonished if the semi-colonial nations should rebel against a condition under which their national resources and means of production are owned and operated by foreign capital. And we should learn first of all that no bomb is powerful enough to kill the people's aspirations, their desire for freedom, for democracy, for the right to work, to have their children educated, to have their health protected. We have the means to wipe out millions of colonial and semi-colonial peoples but the result would be war and not peace, not even the peace of the grave-yard, because the few survivors would continue with the struggle.

The war has not resolved but has, on the contrary, intensified the internal conflicts between progressive and reactionary forces. In most countries there are powerful groups that would like to enjoy the benefits of industrialization while living in a world of economic feudalism, and there are on the other hand increasingly large groups of people who realize that the industrialization of the world imperatively calls for changes in the social and economic structure and that the world will never be at peace unless these changes are effected. The intensification of industry in every war-faring country has increased the power of the working class, and the trade unions are recognizing that they have an important part to play in the political life of their countries. There also can be no doubt that it was the progressive forces of the working class and not the reactionary elements that played the greatest part in the underground movements of liberation and in the guerillas of occupied European countries.

When we look at the world today, we find in most countries this internal struggle between yesterday and to-morrow expressed, sometimes

as a mere tension, as a mere parliamentary debate about such elementary matters as social insurance, all the way to open civil war as it is fought in China. Some countries have postponed the issue either by forming temporary coalitions between the parties or because they are occupied by foreign armies, but the problems are not solved in such a way and we may still expect a whole series of civil wars.

The need for a world organization is strongly felt today in many quarters in spite of the failures of the League of Nations, but rarely has a child been born under more inauspicious circumstances than the United Nations Organization. It became soon apparent that no country was willing to give up any of its sovereignty, and the admission of fascist states shattered the last hopes that we might have had. The insistence on the admission of Argentina with its openly fascist government was a blow from which the UNO will not easily recover. To common people like myself who are not versed in the subtle game of diplomacy, the admission of Argentina with its present government documented the continuation of the policy of appeasement that has had such fatal results in the past. And it also documented that while the UNO was talking a great deal of democracy, it had no objection to fascism.

Fascism, the most destructive force of our century, is by no means dead. The three major fascist nations have been forced to surrender unconditionally. Their people are stunned by the defeat they have suffered but it would be naive to assume that the indoctrination of an entire generation was wiped out with one stroke of the pen when the documents of surrender were signed. It takes some time to organize an underground movement, a clandestine press and all that goes with it, but we should not be astonished if they appeared in Germany, Italy, Japan and other defeated countries and we can be sure that they will take full advantage of the slightest mistakes we make.

Fascism is by no means dead; it is still openly ruling two European countries and a fascist wave is hitting the Latin American continent. Fascism today as yesterday is the rallying flag for all reactionary forces that are ready to sacrifice democracy for the preservation of a rotten *status quo* by violent means.

It is not encouraging to find that most of our statesmen are thinking in the traditional categories of yesterday, as if nothing had happened in the world, and yet the mere fact that we have learned to control atomic energy has changed everything. It is strange that nobody has suggested as yet that our national capital should be transferred to the Rocky Mountains, that it is time to disperse the population of our large cities. There

is no need for them any more anyway. There is no reason why industries and business should be concentrated in a small area. A wire permits us to carry electrical energy to any place at little cost, and telephone and airplane—and soon the helicopter—permit people to deal with each other easily without being forced to live in the same area.

The discovery of the production of atomic energy at the present moment is a great catastrophe because it comes at a time when mankind is not ready for it. Not only does it provide the most savage weapon the world has ever seen, but it increases the gap between technical and social development. I think there can be no doubt that at the bottom of all our present troubles is the fact that technology has developed more rapidly than the social adaptations to the conditions created by the new technology. Now, learning a lesson from depression and war, a number of countries are making a great effort to create the social conditions that are needed for an industrial society to live in peace and prosperity. And at this very moment, technology is again jumping ahead, running out of bounds.

Atomic energy could, of course, be used to very good ends, but is there a need for it now? We are told that some day we shall have automobiles with engines not larger than a fist. So what? I have a very good car with a gasoline engine, but for three years I could hardly drive it because I and my fellow citizens had not been able to prevent the war. And before that, thousands of people were unable to drive their cars not because the engines were bad or the fuel rare, but because they were unemployed as a result of the great economic depression. In other words, in order to drive a car for business purposes and enjoyment, we need not only an engine and fuel, but also peace and full employment, and the two latter factors are just as important as the others. Why then should we concentrate all our efforts on the technical side of the problem and utterly neglect the other, the social side?

Our universities are now permitted to reveal what their research activities in wartime have been. The veil of secrecy has been lifted, and they are proud of the part they have played in the development of the atomic bomb and of an endless number of other war weapons and instruments. They are justified in being proud because through their labor they have greatly contributed to the victorious outcome of the war. They have given a most impressive demonstration of what scientific planning on a national scale can achieve, just as the whole country has demonstrated that a scientifically planned economy produces the goods that are needed

and provides full employment and therefore a high purchasing power of the population.

It is, however, disturbing that so far no university has been heard to have carried out large-scale war research projects along other lines, in the social sciences, in the humanities or in philosophy. And yet there could not be any doubt that an enormous amount of such research would be needed for the war and post-war. Under the pressure of circumstances many government agencies were forced to carry out some research, particularly in economics, sociology, geography, and anthropology. But much of this work was haphazard, amateurish, uncoordinated. It was not planned on a national scale and could in no way compare neither in scope nor achievement with the work performed in science.

The universities loaned personnel to the government, gave elementary instruction in language and area courses, but they were never called upon to mobilize all their resources for research in the social sciences and humanities according to a master-plan, nor did they take the initiative in the matter. The war was considered a technical affair that was to be left to the scientists. And today we are paying the price for this neglect.

Indeed, the tasks that should have been tackled were gigantic. When we entered the war actively, the tide had turned already and it was easily apparent that sooner or later we would have to occupy and administer foreign countries under the most difficult circumstances. The present failures have revealed how inadequate the preliminary research had been.

Again, it was not difficult to foresee that the war would end some day and that we would have to make peace with countries which as a result of their defeat would be shattered to their very foundation. We knew that far-reaching re-orientations would take place of necessity. The cooperative researches of our best historians, sociologists, economists, philologists, and psychologists would have been needed to prepare for intelligent peace. But the failure of the London conference revealed dramatically what a poor research job had been done.

It is frequently overlooked that research in the social sciences is infinitely more difficult than research in the natural sciences where the number of factors that have to be taken into account is very much smaller, where experiments can be carried out in a relatively short time within the walls of a laboratory, and where it becomes apparent very quickly whether a result is correct or not. The social sciences use statistical methods also but they always have to take the human factor into account, the emotions and passions of man. Their experiments are carried out with groups, sometimes with entire nations, and may require decades.

Subsequent events reveal whether a historical or sociological analysis was correct or not, and this again may take years.

Universities like quick results that give them prestige and bring in funds. Hence it is no wonder that they cultivate the natural sciences with preference. During the war they enjoyed their contacts with industry, and they appreciated the money that was handed out lavishly to them who were accustomed to struggle along with pennies. I would not be astonished if some of our great universities would gradually develop into technological institutes in which the humanities and social sciences would be kept as the smallest of many divisions.

There is another very serious aspect to the problem that must be mentioned in this connection. At a conference on atomic energy held at Philadelphia recently under the joint auspices of the American Philosophical Society and the National Academy of Sciences, Professor Henry D. Smyth of Princeton University raised the pertinent question why it had been possible for physics to take such giant strides and why it had apparently not been possible in other than scientific fields. It was a very challenging question and I am sure that it can be answered in various ways, but I would like to offer one answer which, I think, is important.

Galileo was probably the last physicist who was persecuted for the result of his researches. A revolutionary in physics like Isaac Newton was honored, was knighted, and buried in Westminster Abbey. Albert Einstein was persecuted in Germany not for his physical discoveries but for his race, and he is universally worshipped today. For three hundred years, physics was permitted to develop freely in universities, in academies, later in industry. It was supported liberally, and physicists felt safe no matter what the result of their investigations might be.

In the social sciences there is in America even today—with very few exceptions—no freedom of research. The social scientists, the historian and particularly the economist, political scientist and sociologist, must be orthodox. In research and teaching, they must conform with an officially accepted body of dogmas. Universities select them for their orthodoxy, and if one of them in the course of his researches should attain results that are considered heretic, he would soon be dismissed. Universities cannot afford to hurt the feelings of people on whom they depend for financial support. I know of a famous institution in which researchers are told in advance what results are expected from them; and if their studies produce different results, they are suppressed and the men are dismissed at the first opportunity.

Careful selection of personnel, scarcity of funds and the constant, never

admitted but nevertheless very real, threat of dismissal are usually sufficient to keep social scientists in line and to divert their energies into noncontroversial fields, far from "dangerous thoughts." But this also provides an answer to Professor Smyth's question and explains why the social sciences could not progress as physics has. The trouble is that such difficult and basic problems as production, distribution, consumption, war and peace, prosperity and misery, social security and many others cannot be solved, particularly not at such a critical time, unless there is independent research.

What is needed then is intellectual freedom in the social sciences also, intelligent planning and coordination of research and a better financial support than in the past. Unfortunately the chances of having conditions improved are very slight. The war has greatly increased the social tension and tolerance is hardly to be expected. The atomic bomb has demonstrated what the expenditure of 2 billion dollars and careful planning can achieve in science. The Government is, therefore, fully prepared to spend millions of dollars every year for more scientific research but hardly any money for research in the social sciences, in the humanities or in philosophy, in other words for studies on how to apply our scientific knowledge for peaceful purposes, to promote the welfare of the human race rather than to destroy it.

That great American institution, *The New Yorker*, recently (Nov. 10, 1945), published a bitter cartoon in which the worried parents of a boy ask him: "But what on earth do you want to be a scientist for, Robert? Isn't there enough trouble in the world already?" What a far way we have gone, from the hopes of the 18th century, to the faith in science in the 19th century, to the fears of today and the cries for a moratorium on scientific research.

It is not too late to avert a cataclysm, not yet, but time is getting short and it seems that in this country neither the depression nor the war were serious enough to open the eyes of the people. The more important it is to carry on free, detached academic research in the social sciences, the humanities and in philosophy. This is the greatest challenge that has ever been made to our universities.

AN ESSAY ON THE USEFULNESS OF MEDICAL HISTORY FOR MEDICINE

OWSEI TEMKIN *

> "By despising all that has preceded us, we teach others to despise ourselves. Where there is no established scale nor rooted faith in excellence, all superiority—our own as well as that of others—soon comes to the ground."
>
> —WILLIAM HAZLITT, *On Reading New Books.*

It is obvious that the history of culture includes the history of medicine. But it is not equally obvious that the history of medicine should be cultivated by physicians as a branch of medicine. Indeed, a good prima facie case can be made against any such claims. Medicine, it may be argued, is a progressive science which has to look forward to further improvements rather than backward to stages now superseded. The history of medicine may interest the historian, it may occupy the leisure hours of the physician, but it teaches nothing new and is, therefore, useless.

But the fact remains that for more than 2000 years physicians have studied medical history.[1] It seems promising, therefore, to inquire into

* The thoughts expressed in the following pages had been accumulating in my mind for many years before I decided on writing this essay. I am, therefore, not able to cite all the publications to which I may be indebted, nor to thank all those to whom I owe some stimulating suggestions. I should, however, like to thank Dr. Henry E. Sigerist and my present and former colleagues, especially Dr. Ludwig Edelstein and Dr. Erwin Ackerknecht, for the benefit I derived from frequent conversations on topics related to this essay. At the same time I wish to state that responsibility for the views here expressed rests on me alone.

[1] I wish to emphasize that this essay is not intended as an outline of the history of medical historiography. This subject has been dealt with by Paul Diepgen and his school in the following publications:

a. Paul Diepgen. Zur Geschichte der Historiographie der Medizin. *Abhandlungen aus dem Gebiete der mittleren und neueren Geschichte und ihrer Hilfswissenschaften. Eine Festgabe zum siebzigsten Geburtstag Geh. Rat Prof. Dr. Heinrich Finke gewidmet von Schülern und Verehrern des In- und Auslandes.* Aschendorffsche Verlagsbuchhandlung, Münster i. W., 1925, pp. 442-465. This article is a general introductory outline with main emphasis on Le Clerc and Freind. It does not go beyond the early 18th century.

b. Edith Heischkel. *Die Medizingeschichtschreibung von ihren Anfängen bis zum Beginn des 16. Jahrhunderts.* Berlin, Emil Eberling, 1938 [Abhandlungen zur Geschichte der Medizin und der Naturwissenschaften. Heft 28]. This is a detailed study of the period indicated by the title. The 18th century and 19th century (for Germany) have been covered by:

c. Paul Diepgen. Albrecht Haller und die Geschichte der Medizin. *Historische*

the purposes which have motivated their historical researches in the past and present. Such an inquiry will show whether these purposes still have a medical meaning, and will reveal the possible usefulness of history for medicine. Consequently, the main part of the present essay will be devoted to a sketch of the uses to which the various forms of medical history have been put up to the present day. To this, a few remarks will be added on the special needs of our own time for medical history.

I.

Before the true forms of history can be discussed, it is necessary to deal with its most archaic form: mythology. Mythology is the antipode of history. But since nobody thinks or acts without some picture of the past, we are all apt to accept a historical myth where we cannot rely on historical knowledge. Where history is lacking, mythology takes its place and those who disdain history are among the foremost victims of mythology.

1.

According to legend, Asclepius, the healing god of the Greeks, learned his art from the centaur Cheiron and bequeathed it to the physicians, the "sons of Asclepius." In ancient Egypt, the Gods themselves were credited with the authorship of the sacred medical texts.[2] Indian surgeons, in support of their claim that surgery was the oldest of all the branches of medicine, referred to the divine Ashvins who had reunited the head and trunk of the decapitated god Yajna.[3]

Studien und Skizzen zu Natur- und Heilwissenschaft. Festgabe Georg Sticker zum siebzigsten Geburtstage dargeboten. Berlin, Julius Springer, 1930, pp. 100-111.

d. Edith Heischkel. *Die Medizinhistoriographie im XVIII. Jahrhundert.* Leiden, E. J. Brill, 1931.

e. Hans von Seemen. *Zur Kenntnis der Medizinhistorie in der deutschen Romantik.* Zürich-Leipzig-Berlin, Orell Füssli, 1926 [Beiträge zur Geschichte der Medizin. Heft III].

f. Edith Heischkel. Die deutsche Medizingeschichtschreibung in der ersten Hälfte des 19. Jahrhunderts. *Klinische Wochenschrift*, vol. 12, 1933, pp. 714-717.

g. Paul Diepgen. Das Schicksal der deutschen Medizingeschichte im Zeitalter der Naturwissenschaften und ihre Aufgaben in der Gegenwart. *Deutsche Medizinische Wochenschrift*, vol. 60, 1934, pp. 66-70. Unfortunately, this little article, which leads up to 1934, due to its concessions to National Socialist doctrines gives a very distorted picture.

[2] Cf. J. H. Breasted, *The Edwin Smith Surgical Papyrus*, vol. 1, The University of Chicago Press, 1930, p. 5.

[3] Cf. *An English translation of the Sushruta Samhita*, edited and published by Kaviraj Kunja Lal Bhishagratna, vol. 1, Calcutta, 1907, p. 6 f.

In all these myths there is a desire to trace the origin of medicine back to the gods and a very remote past. What is old is sacred, and what the gods invented is above human criticism. Man may have misused the invention and may have spoiled it, but in itself it is good and pure. " Honour a physician with the honor due unto him for he uses which ye may have of him: for the Lord hath created him," says Jesus the son of Sirach,[4] meaning that medicine is not mere human arrogance, but God's own creation and therefore honorable and just. To the mythological way of thinking the whole development of medicine may appear as a fall from original greatness. This is particularly the case with the reformer who intends to bring to light again the old and essential truth. Thus Paracelsus opens the defence of his own life and work with the following myth: " Whereas God suffered the spirit of medicine to emerge in its fundamentals through Apollo, through Machaon, Podalirius and Hippocrates, and suffered the light of nature to work without a darkened spirit, exceeding wonderful great works, great *Magnalia*, great *Miracula*, were performed through the Mysteries, Elixirs, Arcana and Essences of nature, and medicine was marvellously conceived in a few pious men, as was told above. Whereas, however, the Evil One with his corn cockles and his weeds suffers nothing to grow for us in an undefiled wheatfield, medicine has been darkened by the first spirit of nature and has fallen among the anti-physicians and has become so entangled with persons and sophistries, that no one has been able to advance as far in the works as Machaon and Hippocrates did." [5]

Thus the myth serves as justification, whether of the profession as a whole or of a special doctrine, by sanctifying its origin. With the decline of the religious form of mythological thinking, imagination in a more rationalistic garb takes over the same function. A theory of the origin of medicine is now advanced which sounds plausible, and is yet based on belief rather than on fact. The earliest rationalistic myth of this kind is to be found in the book " On Ancient Medicine " of the Hippocratic collection. Its author wants to prove that none of the newfangled philosophical systems of his time can be considered as a reliable basis for medicine. Instead he claims that " medicine has long had all its means to hand, and has discovered both a principle and a method, through which the discoveries made during a long period are many and excellent, while full

[4] Ecclesiasticus, ch. 38.

[5] Seven Defensiones, translated by C. Lilian Temkin, in: *Four treatises of Theophrastus von Hohenheim, called Paracelsus*, ed. Henry E. Sigerist, Baltimore, The Johns Hopkins Press, 1941, p. 10.

discovery will be made, if the inquirer be competent, conduct his researches with knowledge of the discoveries already made, and make them his starting-point." [6] In order to progress the physician has but to follow in the footsteps of ancient medicine. The essence of this ancient medicine is explained in a myth concerning its origin. In some remote past, man lived on the same crude food as animals. The severe suffering which he had to endure from this diet led him to prepare such food as we eat now. The next step in the same direction led to the discovery of medicine. "Experimenting with food they boiled or baked, after mixing, many other things, combining the strong and uncompounded with the weaker components so as to adapt all to the constitution and power of man, thinking that from foods which, being too strong, the human constitution cannot assimilate when eaten, will come pain, disease, and death, while from such as can be assimilated will come nourishment, growth and health. To this discovery and research what juster or more appropriate name could be given than medicine, seeing that it has been discovered with a view to the health, saving and nourishment of man, in the place of that mode of living from which came the pain, disease and death?" [7] This is the way in which medicine was discovered and this is the right way in which it should proceed. Of course, the author of this book had no real historical evidence by which to support his thesis and had, therefore, to rely on plausible arguments. Among others he adduced the example of the barbarians in order to prove the condition of the premedical state of humanity. "At any rate even at the present day such as do not use medical science, barbarians and some Greeks, live as do those in health, just as they please, and would neither forgo nor restrict the satisfaction of any of their desires." [8] Without putting undue strain on the imagination, it is possible to draw a parallel between this passage and the modern attempts to reconstruct the origins of medicine from analogies with the so-called primitives. Indeed, primitive medicine plays its rôle in our histories of medicine just because we do not know much more about the beginning of medicine than the Hippocratic author did.[8a] Yet we are loathe to admit our ignorance and to await the discovery of more telling historical material than we possess today before embarking upon a tale

[6] *Hippocrates*, with an English translation by W. H. S. Jones, vol. 1, 1923, p. 15 [The Loeb Classical Library].

[7] *Op. cit.*, p. 19 f.

[8] *Op. cit.*, p. 21, where, however, I have replaced Jones' translation of "foreigners" by the more literal "barbarians."

[8a] This remark in no way reflects upon the serious study of medicine among primitive peoples, a discipline in its own right.

of the origins. We claim that useful drugs were discovered by a process of trial and error because our belief in the experimental method tempts us to assume its existence wherever useful things are found.[9] Lucas-Championnière fought for the decompression therapy of intracranial diseases, and accordingly credited prehistoric man with an unconscious insight into the curative value of trephining.[10]

There also exists mythology in reverse, where the evil of the present is imputed to the survival of an older past. This form of historical invention is more closely attached to the "enlightened" frame of mind, and finds its ancient model in the most enlightened work of the Hippocratic collection, the book "On the Sacred Disease." The author contends that epilepsy, the sacred disease, is as natural as any other disease and curable by the same natural means. He combats popular superstition and the magicians who impute the cause of the disease to the gods and treat it by magic rites. To hit this concept at its very root he discredits its origin. "My own view is that those who first attributed a sacred character to this malady were like the magicians, purifiers, charlatans and quacks of our own day, men who claim great piety and superior knowledge." [11] It was along similar lines of thought that many "enlightened" myths were invented before as well as after the 18th century. Today too, this kind of myth plays its rôle when the prehistoric practice of medicine is uncritically attributed to some forerunners of present-day medicine men and shamans and when it is maintained that diseases were attributed to ghosts and demons and other superstitions of primitive and folk medicine. The philosophical achievement of modern science will stand out all the more clearly if it can be contrasted with the murky background from which it had to rise. And some modern psychologists, desiring to explain conscience as the natural outgrowth of mere human relations have indulged in tales of a mythological "Ur-father" and an "Ur-horde." [12]

The criterion of a myth in the sense indicated is not whether eventually it will prove true or false. A historical theory tries to make a coherent picture out of a set of historical data, and it stands and falls with its supporting facts. A myth, on the other hand, steps in where sufficient

[9] Cf. E. H. Ackerknecht, Problems of primitive medicine, *Bull. Hist. Med.*, vol. 11, 1942, pp. 503-521, especially pp. 504 and 512 f.

[10] Lucas-Championnière, *Trépanation néolithique, trépanation pré-Colombienne, trépanation des Kabyles, trépanation traditionnelle* (Les origines de la trépanation décompressive), Paris, G. Steinheil, 1912.

[11] Cf. above, note 6, vol. 2, p. 141.

[12] Cf. S. Freud, *Das Unbehagen in der Kultur*, Wien, 1930.

historical data are lacking. Its function is to support a living faith without or even against historical evidence. Therein lies its strength and its weakness, its use and abuse.

2.

When philosophy conquered mythology, medicine too became imbued with the spirit of speculation. The Hippocratic physicians speculated on the structure of the body, the functions of the organs and the causes of disease. In the realm of medicine, therefore, they had the same approach as had the pre-Socratic philosophers concerning the universe.

Speculation tends to culminate in opinions which never quite sever their bond with the individuality of the thinker. This is most clearly seen in the history of philosophy which presents itself as a series of systems. The same is true of medicine as long as medical thought remains speculative. It is, therefore, not surprising that the first history of medicine which we possess is a collection of the opinions of the physicians who lived in the era of Hippocrates. Nor is it surprising that this collection was prepared by Menon, a pupil of the philosopher Aristotle, for Aristotle was accustomed to cite and analyze the opinions of his predecessors so that by agreement or refutation he might elucidate his own position. In other words, the doxographical method proves vital wherever philosophy or science tries to reach truth by dialectic argument.

Throughout Antiquity, and even far into modern times, the dialectic method remained alive and doxography its necessary partner. Even where a simple description might be expected, controversy often took its place. Soranus (about 120 A. D.), the author of a textbook on gynecology, opens the chapter "On the flux of women" with the following words: "According to the ancients, as Alexander Philalethes says in the first book on Women's Diseases, the flux is 'an increased flow of blood through the uterus over a protracted period.' But according to Demetrius the Herophilean, it is 'a flow of fluid matter through the uterus over a protracted period' since the flux may not be sanguineous only, but different at different times. In our opinion, however, it is a chronic rheum of the uterus where the secreted fluid is perceptibly increased. According to Asclepiades and some others there are two different kinds of flux (for one kind is red, the other is watery and white), whereas according to Demetrius the differences lie in color and action" [18] and so on. Such a procedure is essentially scholastic, and indeed medieval scholasticism

[18] *Soranı Gynaeciorum libri IV*, ed. I. Ilberg, Lipsiae et Berolini, 1927, p. 122 [Corpus Medicorum Graecorum IV].

which quotes authorities pro and con, uses this method extensively in medical as well as in other writings. In order to reach an opinion of his own, the schoolman cites the opinions of others. And it is the opinion that counts and a claim to observed fact rather than the observation itself. Doxography does not represent a record of what previous generations have already known, but what they have opined and pretended to know.

Opinions count and are worth while debating as long as they are alive. Or vice versa: as long as opinions are still discussed they *are* alive, and their authors still treated like contemporaries. In the above quoted passage, Soranus names Alexander Philalethes, Demetrius the Herophilean and Asclepiades without giving their dates. He may or may not have presupposed such knowledge on the side of his readers, for somehow this is irrelevant to his purpose. On the contrary, full historical understanding of a person sees him as a child of his time and thereby distances him from the present. We probably know much more about the real Hippocrates and Galen than did the Middle Ages or even the 18th century. Yet for the eighteenth century, the opinions of these men were still matters of vital concern, whereas for us they have become matters of "historical" interest. Cabanis, at the outbreak of the French revolution, wrote a book "On the Degree of Certitude in Medicine" [14] which is one great eulogy of Hippocrates. If such a book were written at all in our time, it would scarcely be based on the dicta of Hippocrates.

The importance of doxography was greatly enhanced by the development of medical sects from the 3rd century B. C. on. From then on there had to be included not only the opinions of individuals but, in addition, the basic tenets of the sect to which the individual belonged. The dogmatists believed in the value of anatomical and physiological research for the understanding and proper treatment of disease. Their opponents, the empiricists, denied the possibility of ever finding the obscure causes of disease and instead placed their confidence in experience. Then, at the beginning of the present era, a third sect, that of the methodists, arose who were satisfied with grouping diseases into one of the three conditions of status strictus, status laxus or status mixtus. The fight between the sects lasted far into late Antiquity and the medical author had to declare his adherence or opposition to the sects. Thus Celsus in the preface of his work "On Medicine" gave a historical sketch of the development of medicine up to his own time. The emphasis of this preface was laid

[14] P. J. G. Cabanis, *Du degré de certitude de la médecine*, nouvelle édition, Paris, 1803; cf. p. 6 where Cabanis states that the book ought to have appeared in 1789.

on the dogmas of the three sects and their main representatives and its aim was the clarification of Celsus' own attitude. The views which he finds nearest the truth " are neither wholly in accord with one opinion or another, nor exceedingly at variance with both, but hold a sort of intermediate place between divers sentiments, a thing which may be observed in most controversies when men seek impartially for truth, as in the present case." [15]

The skilful historical form which Celsus gives to his exposition should not cloud the fact that doxography of the sects is as little bound to historical understanding or even exact chronology as is doxography of individiual opinions. In the little book " On Sects for the Beginners," Galen outlines the sects and his own relationship to them with scanty reference to dates and historical circumstances. The decision which the tyro has to make is one between living issues.

Not very long after Galen the opinions of the sects become largely a matter of the past. With the ascent of Galenism, medicine appears much more unified than before. If Galen is blamed for the tyranny his ideas exercised for over one thousand years he might as well be praised for the cosmopolitan character of scholastic medicine. It is first the opposition to and then the destruction of the Galenic system which again split medicine into sects. Just as with Luther the unity of the Catholic Church is decisively broken, so with Paracelsus—the " Lutherus medicorum "—the unity of Galenism is destroyed. Now the split runs between Galenists on the one hand and Chemists on the other. A hundred years later, under the impact of new discoveries and the Cartesian philosophy, Galenism succumbs altogether. In its place there arise many systems, beginning with Iatrophysics and Iatrochemistry and ending (temporarily at least) with Homeopathy. The controversial spirit of eighteenth century medicine is almost as strong as that permeating Galen's works. The doctors who clash at the bedside of the patient have often been pictured. Yet they are no mere garrulous and quarrelsome characters. Rather their behavior represents the state of medicine in which thinking and practice were still dependent on philosophical differences, and that means on conviction by argument. To know the various systems of the time was a matter of necessary orientation for the doctor. And the task of presenting the leading ideas of these systems was one of the duties which the contemporary historians took upon themselves.

[15] Celsus, *De medicina*, with an English translation by W. G. Spencer, vol. 1, 1935, p. 25 [The Loeb Classical Library]. In the passage quoted Celsus refers to the dogmatists and empiricists since he rejects the methodists altogether.

The usefulness of doxography up to the early 19th century seems clear. But with the advancing century medicine approached the positive sciences. Opinion and dialectic argument inside medicine have been replaced by scientific theory and experimental or statistical proof. Once again medicine appears cosmopolitan and unified. In the present situation, therefore, doxography does not have the same function as in former times. Its function now is to give an account of those philosophical and social ideas which struggle over the development which medicine as a whole ought to take. The necessity of knowing and, therefore, presenting these opinions will be shown in a different connection when the reasons for entrusting medical history with this task will also be stated.

3.

Easy bridges lead from the mere exposition of opinions and theories to other forms of historical endeavors, notably biography and bibliography. Interest in the teachings of individual physicians attracts attention to their lives and the greater the authority of a name, the greater the desire to know something about the man. The value of a doctrine seems enhanced if its author appears worthy of admiration, and the falsity of a heresy is even more obvious if traced back to a good-for-nothing. The great name of Hippocrates has stimulated biographical attempts since the times of Antiquity. The discrepancy between the scanty authentic data and the fame of "the father of medicine" led to many legendary embellishments and novelistic fancies. An alleged correspondence with Hippocrates as the central figure depicted him not only as a great physician and philosopher, but as a Greek national hero who refused to serve the king of Persia, the enemy of his nation. This legend probably goes back to a time when Greece, no longer really free, was yet jealous of its former greatness and when panhellenic sentiments, in retrospect, were attributed to the great men of the 5th century B. C.[16] However this may be, this story is the early example of a motive that has become very strong in modern times. In the Renaissance, medical history appeared by preference as a collection of medical biographies,[17] and the rising nationalism of the Italians, French and Germans took pride in an account of their famous physicians. This tendency, of course, is still very much alive, and has developed its good as well as bad sides:

[16] Cf. L. Edelstein, Hippocrates, in: Pauly-Wissowa, *Real-Encyclopädie d. classischen Altertumswissenschaft*, Supplementband VI, 1935, col. 1301 f.

[17] Cf. Heischkel (above, note 1b).

good, because it has stimulated detailed research into the national past and brought back to memory many a worthy name; bad, because it has sometimes provoked nationalistic arguments and ridiculous exaggerations. Claims for priorities, for instance some of those regarding the discovery of the circulation of the blood, have been advanced with a verve transcending the desire for historical justice. The merits of Paracelsus were exaggerated out of all proportion by some historians who considered him the protagonist of "German medicine." The latter example is all the more remarkable, since former centuries had tried to belittle Paracelsus as the hated instigator of inconvenient and absurd novelties. This remarkable Renaissance figure, astrologer, alchemist and mystic, and, at the same time, prophet of a new medical science, had been decried as a sorcerer, drunkard and wayfarer by his own contemporaries.[18] For the medical orthodoxy of the 16th and 17th centuries and the following period of Enlightenment he personified all that was bad and ridiculous in hermetic medicine.

Legends and anecdotes which so often blur the truthfulness of a biography accentuate rather than disguise an essential fact: all medical biographies deal with the lives of "great doctors." It has only to be added that greatness lies in the perspective. Hippocrates, rightly or wrongly, has been acclaimed as the founder of rational medicine, the keen observer and humane physician. His biographer may enthusiastically uphold this picture or he may critically reduce it to its true proportions. In either event, the biography centers around this real or pretended greatness. Paracelsus is the great heresiarch admired or condemned for his cosmic view of man and disease. John Hunter is the great surgeon scientist whom curiosity and the zeal for factual knowledge drive to body snatching and experimentation with his own health. Ephraim McDowell is the pioneer who successfully performs an operation which others before him did not dare to attempt. Even some obscure old "Doc Thompson"[19] may become the hero of a biography because of his modest unselfish devotion to the needs of the community or as the deterrent example of a drab routinier. In all of these cases there is one condition which must be fulfilled. The life of the man must appear as an outstanding example, be it of individual stature or of a general condition. He will be great

[18] Cf. W. Artelt, Paracelsus im Urteil d. Medizinhistorik, *Fortschritte d. Medizin*, vol. 50, 1932, pp. 929-933.

[19] Cf. G. Miller, The study of American medical history, *Bull. Hist. Med.*, vol. 17, 1945, p. 3 f.

because through him the lives of many others were endowed with meaning.

No doubt, there are many things that will find their place in a comprehensive biography. A modern historian will stress the forces, social, economic, traditional and perhaps even hereditary, which shaped the man and urged him to his work. Vesalius lived at a time that was ripe for the overthrow of Galenic animal anatomy. Before him, Leonardo da Vinci had portrayed the structure of the human body as it can be seen in reality. Contemporaneously with Vesalius, Canano had engaged upon a similar work. Undoubtedly human anatomy would have been discovered even if Vesalius had never lived. Antiseptic surgery too, would probably have been invented without Lister, for its principles were inherent in Pasteur's work and Lemaire had actually anticipated some theoretical and practical possibilities of carbolic acid.[20] But the fact remains that the reform of anatomy is due to Vesalius, and antiseptic surgery to Lister. It is their work and the particular individual form they gave to it that opened the way and influenced the subsequent development. "Many are called but few are chosen" holds good of medical discoveries and inventions too. The individual factor remains, after all social, economic and other circumstances have been duly considered and it is just this factor which forms the core of a biography.

The function of the biography then is to set an example, to invite admiration and, thereby, imitation. Of his own autobiography Samuel Gross said: "Possibly some good may grow out of such a labor, by stimulating the ambition of those who may come after me to work for the advancement of science and the amelioration of human suffering. The devotion which I have shown to my profession may, perhaps, exert a salutary influence upon the conduct of young physicians, and thus serve to inspire them with a desire to excel in good deeds."[21] In this way, medical biography is useful as an instrument of education. Through the account of their lives, the great masters survive as teachers of the following generations.

4.

The writings of a great physician are a part of his life work and their titles and contents find a natural place in his biography. Moreover, if

[20] Cf. H. A. Kelly, Jules Lemaire: the first to recognize the true nature of wound infection and inflammation, and the first to use carbolic acid in medicine and surgery, *J. A. M. A.*, vol. 36, 1901, pp. 1083-1088.

[21] *Autobiography of Samuel D. Gross*, vol. 1, Philadelphia, George Barrie, 1887, p. 1.

opinions are considered authoritative because of the author from whose pen they hail, then questions of authenticity become important too. Ancient and medieval professors of medicine, therefore, used to argue the genuineness of the work they set out to read and explain to their students.

But to list and analyze the works of a few outstanding physicians is not the only, perhaps not even the most essential part of medical bibliography. Probably in Antiquity, certainly among the Arabs, and ever more frequently from the Renaissance on, the works of all famous physicians are catalogued. This can take different forms. Ibn Abi Useibia (13th century) appended his bibliographic lists to the lives of the men he discussed. Here the biographic information still stood in the foreground. Van der Linden (1609-1664) followed an alphabetical arrangement by authors' names, with the accent on the writings rather than on the lives. Albrecht von Haller too used the bio-bibliographic method, choosing a chronological arrangement. Yet his various "Bibliothecae" cover different branches of science and medicine: the "Bibliotheca Botanica," "Anatomica," "Chirurgica," and "Bibliotheca Medicinae Practicae" each being independent from the other. Finally, the biographic interest may be completely overshadowed by an interest in the contents. Now as before, many bibliographies are arranged according to subjects or devoted to one subject only.

These, in brief, are some types of medical bibliography to which various transitional forms and modifications could be added. But leaving aside questions of method and technique, there is a common aim inherent in all bibliographical work, viz.: to facilitate the access to medical literature. And since it is presumed that even old medical books contain many pertinent and valuable observations, experiences and experiments, their titles are collected and their contents scrutinized.

It is axiomatic that every good piece of research, whether clinical or experimental, ought to include a perusal of the literature. How far back this search should go will, first of all, depend on the subject treated. The development of new physical, chemical and other scientific methods has in itself excluded much of the older literature. Nobody will search medieval authors for data on aviation medicine. Studies on the electroencephalogram in epileptics will not find material in the Hippocratic work "On the Sacred Disease." In clinical investigations matters are somewhat different. Even when a new morbid entity is described which formerly had not been recognized as such, the older authors are sometimes found to have described symptoms of the disease though they had not been

aware of its nosologic individuality. Virchow, for instance, in his first publication on leukemia could refer to Hippocrates and Haller.[23] Newly recommended cures and remedies, unless they are complicated synthetic products, also happen to have a surprisingly long past. When iodine was used in cases of goiter, it was noticed with interest that the Salernitan surgeons had used it in the form of ashes of seaweed and sea sponge.[25] When the malaria therapy of general paralysis gained approval, it was pointed out that Hippocrates had known that convulsions yielded to quartan fever.[24] Even penicillin has been suspected of an old ancestor in the "moss" growing on the skulls of executed persons as described by the Paracelsist Crollius in the 17th century.[25]

As far as positive facts are concerned, there is no strict boundary line between the older literature and the recent one, between a dead past and a living present. The great French historian of medicine, Charles Daremberg, remarked that the history of medicine was the archive of medicine which contained the records of all medical experiences, discoveries and theories from the early beginnings to the present day. Medicine, based as it was on the experiences and observations of many generations could not do without its archive. According to Daremberg the history of medicine comprises medicine in its entirety, it is the sum total of our medical knowledge, including the truth and error of all times.[26]

Opinions may be divided on the question just how promising the reading of older literature may be for the practitioner and research worker. Up to the middle of the seventeenth century, medicine of the schools was inclined to hold the ancient authors in higher regard than the more recent ones. With the rise of the mechanistic systems of iatrophysicists and iatrochemists in the second half of that century, the moderns began to express their different scientific approach by a disregard of the Galenic physiology. Nevertheless, even a hundred years later, Albrecht von Haller showed in the most impressive way how erudition and progressive scientific work could be combined. His tremendous literary knowledge was

[23] R. Virchow, Weisses Blut, in: *Gesammelte Abhandlungen zur wissenschaftlichen Medicin*, Frankfurt a. M., 1856, pp. 149-153.

[25] Cf. G. W. Corner, On early Salernitan surgery and especially the "Bamberg Surgery," *Bull. Hist. Med.*, vol. 5, 1937, p. 17 f. Dr. Corner wisely warns us not to consider this necessarily as a result of rational therapy.

[24] Cf. F. H. Garrison, *An introduction to the history of medicine*, 4th ed., Philadelphia, Saunders, 1929, p. 738.

[25] Cf. A. G. Cranch, Early use of Penicillin (?), *J. A. M. A.*, vol. 123, 1943, p. 990.

[26] Cf. C. Daremberg, *Histoire des sciences médicales*, t. premier, Paris, 1870, pp. XIV ff. and 7 ff.

integrated into his " Elementa Physiologiae " which are a veritable storehouse of information where each predecessor receives his due. Magendie who was in the habit of making his own experiments first and consulting the literature afterwards, repeatedly " found the whole discovery in Haller " and " cursed more than once this wretched book where everything was to be found." [27] In clinical medicine, the tradition remained unbroken into the 19th century. For Sydenham, the Hippocratic " Epidemics " were the work which he himself tried to emulate. Baglivi, the most radical of the Iatrophysicists, turned to Hippocrates as soon as he left the laboratory and approached the bedside of the patient. To van Swieten and most of the other " enlightened " physicians of the 18th century, Hippocrates, Aretaeus, Caelius Aurelianus were colleagues who had to be consulted. Greek and Latin authors were still read and interpreted in the medical faculties of the universities in the early 19th century. For his doctoral degree Laënnec submitted a thesis on the doctrine of Hippocrates " relative to practical medicine." [28]

This changed with the generation of physiologists, pathologists and clinicians who came to the fore around the middle of the last century. Claude Bernard did not withhold his admiration and respect from " the great men who preceded us and to whom we owe the discoveries that are the basis of the present sciences." [29] However, experimental science—and medicine was to become an experimental science—must advance by revolution and " by the absorption of the old truths into a new scientific form." [30] To claim admiration and respect for the predecessors and, at the same time to recognize their work only in so far as it could be absorbed by present day science, this meant to make them mere historical figures. The many single truths which could be distilled from their works had to be fused into more general truths. " The names of the promoters of science gradually disappear in this fusion, and the more science advances the more it takes on an impersonal form *and detaches itself from the past*." [31] It is easy to see that a barrier arose between the experimental scientist and the dead past which was admired from a distance only.

[27] J. M. D. Olmsted, *François Magendie*, New York, Schuman's, 1944, p. 149.

[28] R.-T.-H. Laennec, *Propositions sur la doctrine d'Hippocrate relativement à la médecine-pratique*, Diss. Paris, 1804.

[29] Claude Bernard, *Introduction à l'étude de la médecine expérimentale*, Paris, 1865 p. 73.

[30] *Op. cit.*, p. 72.

[31] *Op. cit.*, p. 75 (italics are mine).

Claude Bernard hardly intended to deny the possibility of learning from older authors. "It is important to bear in mind . . . that what we call experimental medicine is not at all a new medical theory. It is the medicine of all the world and of all times in as far as it contains solid acquisitions and good observations." [22] But Claude Bernard's approach—and that of many modern medical men—to the older literature is different from the approach up to a 100 years ago. He recognizes only that which fits into the present mode of scientific thought and can be assimilated into it. And therein lies his limitation. He inclines to make present-day science the sole judge over the "solid acquisitions and good observations" of the past. The temptation is very great to dismiss lightly or to laugh off those alleged observations that do not fit into the present picture. There is a scientific reverence for facts but also a scientists' prejudice against facts. Scientific thought would be chaotic without integrating theory. And in spite of all admonitions, we tend to exclude or overlook alleged facts which cannot easily be integrated into our prevailing theories. This tendency is all the greater if we are confronted with a work written at a time when controlled experiments and statistical evaluations were practically unknown. We are not readily prepared to admit that even the most fantastic statement may contain some truth. It is much more easily ridiculed than tested. Hence it comes that old observations and cures are usually appreciated only after we have rediscovered them in our own way. The beneficial action of seaweed in goiter and the therapeutic possibilities of the "moss" had little meaning as long as our attention was not directed to them by modern discoveries.

Old books cannot be read like articles in modern periodicals and yield but little information if glanced over in a casual way. They have to be approached with an open mind and just therein lies their usefulness. In trying to do them justice we educate ourselves and cultivate that truly scientific objectivity that is more often presumed than possessed. They help us to see beyond the limits of a prevailing theory and may even sometimes reward us with a new comprehension of an old truth.

5.

The knowledge of old medical books and of their contents does not yet give a historical picture of the past. Only when the lives of great doctors, influential opinions and theories, and factual knowledge are so arranged as to appear as links in a process do we have "historical perspec-

[22] *Op. cit.*, p. 363.

tive." The point of view from which the arrangement is made lies in the historian himself and changes with the time in which he lives. Medical history has been interpreted differently because different approaches have led to different evaluations of the historical material under different perspectives.

Of all possible arrangements the chronological might appear the simplest and most objective. A narrative of all the important events in their sequence from the beginning is easy to follow and would seem independent of the personal predilection of the historian. Gurlt's monumental "History of Surgery" [88] surveys the entire surgical literature of Antiquity, the Middle Ages and the Renaissance. The bulk of this work consists in a detailed analysis of the contents of surgical writings of these periods. The work is almost invaluable for the study of what was thought, known and done by older surgeons. But even here the time sequence is not the only decisive factor. The distinction of periods in itself introduces accents which point to a development rather than a mere sequence in time. These accents are furthermore strengthened by grouping the authors according to countries and by including characterizations of the state of surgery at certain times and among certain peoples. The summary at the end of the work which discusses the achievements in the various fields of surgery follows a selective principle. Many things are excluded which were mentioned in the main part, and the emphasis is on those which seem to fall into the line of progress or stand apart from it.

Chronology is a frame for the arrangement of historical material, but does not yet provide sufficient guidance for the selection of the material. Everything important should be included; but this still leaves the question open as to what is important. Here the nature of medicine itself suggests an answer. As a physician, the historian has certain views of what is true and false in medicine. He compares and evaluates truth and error and, being a historian, he traces the origins and developments of both. Thus Celsus, in his historical introduction, gives a history of the sects and mentions the sequence of the physicians whose doctrines were still influential in his own days. At the same time, this approach contains a strong polemical element since the historian appears as a judge of the past. Possibly, he is a laudator temporis acti and finds that error rather than truth has increased. But if he believes that new discoveries and inventions have broadened medical knowledge in the course of the centuries, he will be guided by the idea of progress. This idea was not

[88] E. Gurlt, *Geschichte der Chirurgie und ihrer Ausübung*, 3 vols., Berlin, 1898.

unknown in Antiquity (Celsus) and the Middle Ages (Guy de Chauliac), but it came fully to the fore at the dawn of the eighteenth century. The battle between the ancients and the moderns was fought, and the work of Vesalius, Harvey and others established progress, at least in anatomy and physiology. "I shall not stop to point out here all the uses which can be made of the History of Medicine; the title alone makes sufficiently known what one has to expect." With these words Daniel Le Clerc referred to his "History of medicine in which are seen the origin and progress of this art from century to century, the sects which have arisen in it, the names of the physicians, their discoveries, their opinions and the most remarkable circumstances of their lives." [34] This work, which initiated modern medical historiography, was completed for Antiquity only. But the mentioning of progress from century to century and of discoveries is suggestive of the new trend. Moreover, the emphasis on the *use* to be made of the work places it among the pragmatic histories of medicine which try to instruct the medical reader and teach him a useful lesson.[35]

Pragmatism was the outstanding feature of medical history during the 18th century and came to a height with Kurt Sprengel's "Versuch einer pragmatischen Geschichte der Arzneykunde" which began to appear in 1792. In the 19th century pragmatism fell into disrepute. Yet it is pragmatism which justifies medical historiography under the perspective of progress, a perspective that cannot be dismissed altogether.

The impact of two world wars has made it doubtful whether mankind is becoming happier, wiser and morally better. But as long as medicine is not measured by these absolute values, progress towards its own limited goal is certain. The means for the prevention, alleviation and cure of disease are more numerous and more effective than heretofore. This fact gives such a firm vantage ground that today perhaps more than ever medical history is being written from the point of view of progress. Pushed to the extreme, this takes the form of emphasizing and praising everything that agrees with modern medical science and dismissing or even decrying everything that is or seems to be different. The Egyptian Edwin Smith Papyrus has been admired as an early document of true medical science to the disparagement of other medical papyri. Galen has

[34] Daniel Le Clerc, *Histoire de la médecine, où l'on voit l'origine et les progrès de cet art, de siècle en siècle; les sectes, qui s'y sont formées; les noms des médecins, leurs découvertes, leurs opinions, et les circonstances les plus remarquables de leur vie*, nouvelle édition, La Haye, 1729.

[35] Cf. Diepgen (above, note 1a).

been severely blamed for having assumed the existence of pores in the septum of the heart, only to satisfy his theory. But Harvey whose theory postulated the existence of capillaries has been lauded for his fearless logic. His physiological work has been purged of Aristotelian categories to make him appear a modern laboratory man pure and simple. The Middle Ages have been dismissed because they showed little progress, or ridiculed because of their superstitions, and the question has not seriously been raised *why* men thought so differently from us.

In this extreme form, the idea of progress shows very clearly its relationship to the time of Enlightenment when praise as well as blame and ridicule were weapons in the struggle of science against orthodoxy and superstition. Where this aim still exists today, the form too has preserved its usefulness. The doctor who combats superstitious treatments will point out that they are rooted in ignorance. When narrow minded prejudice hampers the freedom of experimental research, history will be used as a weapon adducing the instances in which experiments paved the way for progress. Enlightenment as a period has passed, but the need for enlightening is still with us and so is its historical helpmate. Only where the need for enlightening has gone has the radical form of progress history also lost its meaning. It may be amusing to dwell on the stupidity of the Middle Ages, but in historical works written for physicians this is now hardly enlightening. If medicine, today, is much further advanced and more solidly established than in former times, this is generally speaking not our personal merit.

But pragmatic history written from the point of view of progress, does not exhaust its usefulness with its enlightening function. Its interest in discoveries and inventions provides a convenient introduction to the treatment of any scientific theme. And in the form of an introduction it is widely used today. Of course, science can be taught in a systematic form without regard to its historical development. The truth of any scientific statement rests on its proof and not on the man who first pronounced it. Scientific terms can be explained by mere definition without reference to their original meaning. But the historical introduction which shows how the present state of knowledge was reached step by step, has many advantages. In the first place, the appearance of arbitrariness is thereby avoided. By current definition "healing by first intention" is defined as the healing of a wound without intervention of granulations. History explains that the term goes back to Galen who believed that nature's first intention in repairing any severance of tissues was to glue them together directly without intervention of any new substance. But

he added that only in a very few tissues, especially the muscular, were nature and the physician able to follow this " first intention." [86] Secondly, by listing the progressive discoveries in any field, the reader is quickly introduced to the level on which the author wishes to discuss the subject. And if, at the same time, the principal mistakes made in the past are mentioned and disproved, much of the ground is already covered before the first chapter starts, and the position taken by the author has become clear. A treatise on antimalarial drugs, for instance, might start out with the introduction of the cinchona bark in the 17th century and the uncertainties of its use before the isolation of quinine by Pelletier and Caventou in 1820. Then the great expectations placed in this drug in the late 19th century, the various treatment schemes, and the doubtful results obtained during the first World War might be discussed. Even with these few data it could be made clear that this particular drug was not the ideal solution and why the search for other antimalarials has continued. Thus the stage would be set for more recent researches.[87] In the third place, a purely systematic arrangement often gives the impression that everything is known about the subject and forms a logical whole. This danger can be avoided by the historical method which lays bare the various roots from which particular questions and their solutions arise. It is not so easy to define the concept of filariasis. To say that it is a disease caused by filariae may give the impression that it is an entity all the symptoms of which are caused by the presence of this parasite. Yet there exist many forms of filariasis and the dependence on filariae alone is not equally well established for all of them. Misunderstanding may be avoided if the reader is told how in the 19th century a number of different syndromes (elephantiasis, chyluria, etc.) were found associated with filarial infections, and how they were then united under the common denominator " filariasis " by a theory which did not remain undisputed.[88]

But these examples are really superfluous because the whole of medical literature is full of longer or shorter historical accounts of the progress made through the ages. All this goes to show that the usefulness of pragmatic historiography in medicine is not a mere presumption. It is a

[86] Cf. Galen, Ars medica, ch. 29 f., in: *Claudii Galeni Opera omnia*, ed. C. G. Kühn, t. 1, Lipsiae, 1821, p. 385 ff.

[87] Cf. O. Temkin and E. M. Ramsey, *Antimalarial drugs, general outline*, National Research Council, Division of Medical Sciences, Office of Medical Information, Washington, 1944.

[88] Cf. O. Temkin, *A report on the medicinal treatment of Filariasis Bancrofti*, National Research Council, Division of Medical Sciences, Office of Medical Information, Washington, 1945, p. 3.

reality and a form of thought often cultivated even by those who do not consciously admit the usefulness of history in medicine.

6.

Given that pragmatic history is practical in the intention, then no part of medical historiography has a greater pragmatic value than the history of diseases. Here indeed, the historical method constitutes a direct approach to medical problems. The science of medicine deals with man's nature in health and disease. The history of medicine deals with this science as seen in man's thought, actions and institutions. But the history of diseases forms a connecting link, for it contributes to the study of a pathological phenomenon. Historical pathology is at once a part of history and of the science of pathology.

The usefulness of historical pathology is best demonstrated by the epidemic diseases, for epidemics come and go—that is to say, they have histories. As a matter of fact, epidemic diseases more than others have attracted the attention of medical historians. In the late Middle Ages and the 16th and 17th centuries the term "historia morbi" had various shades of meaning.[39] In the first place, it designated what we now call a case history, an account of the illness of an individual. But it also meant the description of a disease as an entity. This latter meaning prevailed with Thomas Sydenham who formulated a program of how the history of diseases should be studied. "In the first place, it is necessary that all diseases be reduced to definite and certain *species*, and that, with the same care which we see exhibited by botanists in their phytologies."[40] But the species of diseases can only be recognized by long observation over many years and epidemic diseases in particular, which may prevail at certain times and be absent at others, require this protracted observation period. Only by comparing many epidemics is it possible to establish the constant features of the underlying disease. On the other hand, Sydenham was aware that if many outbreaks of the same epidemic disease were compared with one another, they all showed certain modifications. The change in the behavior of epidemics he attributed to the "constitution" of the year. This implied that the "historia morbi," as the natural description of a disease, included the history of the disease as

[39] For this and the following, cf. O. Temkin, Studien zum "Sinn"-Begriff in der Medizin, *Kyklos*, Bd. 2, 1929, pp. 50 ff. and 89 ff.

[40] *The works of Thomas Sydenham*, transl. etc. by R. G. Latham, London, Sydenham Society, vol. 1, 1848, p. 13. For the following also cf. Galdston, *op. cit.* (below, note 46).

it manifested itself through the course of time. Thus the history of disease gradually acquired a truly historical connotation in addition to the older meaning. The 18th century saw many monographs on epidemics in certain places and in certain years. The empirical material on which a more comprehensive historical view could be based was thereby considerably increased. At the turn of the century the great histories of epidemic diseases began to appear: Noah Webster's "Brief History of Epidemic and Pestilential Diseases" in 1799, Ozanam's "Histoire médicale générale et particulière des maladies épidémiques contagieuses et épizootiques" in 1817 and 1818. They were continued and crowned by the works of Hecker, Haeser and Hirsch in the following decades. Haeser's "Geschichte der epidemischen Krankheiten" in the third volume of his history of medicine (3rd ed. 1882) and Hirsch's "Handbuch der historisch-geographischen Pathologie" (2nd ed. 1881-86) were published at the beginning of the bacteriological era and represented the terminal points of the older historical pathology. They are antiquated in many respects but as yet unsurpassed for their comprehensiveness.

These historical studies were conceived as pertinent contributions to the knowledge of epidemic diseases. It was believed that they would make it possible to recognize the laws behind the variety of phenomena. Such a belief was well founded in the concept of the "constitution" as the determining factor in the appearance of epidemics. According to Sydenham, the matter stood as follows: "There are different constitutions in different years. They originate neither in their heat nor their cold, their wet nor their drought; but they depend upon certain hidden and inexplicable changes within the bowels of the earth. By the effluvia from these the atmosphere becomes contaminate, and the bodies of men are predisposed and determined, as the case may be, to this or that complaint. This continues during the influence of this or that constitution, which, after the cycle of a few years, gives ground, and makes way for another." [41] Epidemiology, therefore, consisted of the clinical description of the diseases as well as the preceding and concomitant telluric and cosmic events such as climatic changes, earthquakes, volcanic eruptions, etc. Traces of this concept which originated long before Sydenham were still to be found in Haeser's and Hirsch's works. Young Haeser, writing under the stimulus of German romanticism, had even been optimistic enough to believe that historical pathology (chiefly of epidemic diseases) would help to establish the mysterious and supreme laws which deter-

[41] *Op. cit.*, p. 33f.

mined all evolution. "There are two apparently opposite trends that nevertheless combine to a single end, from which science may expect its next advance—the investigation of disease in its greatest and most spiritual terms, in epidemics and their forms through the centuries; and the exploration of the most minute material changes of morbid life through the microscope. Historical pathology will preserve us from forgetting the old *θειον* [i. e. the Divine]; with forceful admonitions it will remind us that life is not grasped with the hands alone nor seen only with the eyes. Microscopic pathology will always remind us that one thing above all is essential if firm ground is to be gained: the exploration of the most minute material life processes. May it only not forget that a world of secrets lies hidden behind the microscopic slide never to be reached by the eye of the investigator." [42]

These words were written in 1839, the year in which Schwann established the cellular theory of the animal organism. Indeed, historical pathology and microscopic pathology went hand in hand during the following decades and Virchow, the founder of cellular pathology, was no mean historian himself. Until the rise of the bacteriological era there was little doubt that the historical approach was a legitimate method in the study of epidemic diseases. With the advance of bacteriology at the end of the 19th century, historical studies seemed to lose in importance. Epidemic diseases were seen as infectious diseases caused by specific agents. The biology of the latter and the mode of infection rather than any nebulous "constitution" accounted for the outbreak of an epidemic. The virulence of bacteria and the conditions of immunity in the population explained strength, length and periodicity of the outbreaks. In the initial enthusiasm it was sometimes overlooked that the experimental method cannot altogether replace knowledge of the historical manifestations of epidemics. A theory is complete only when it leaves no questions unanswered and when no unknown "x-factor" remains. But the history of epidemics forces us to assume such a factor, e. g. when we ask why there were pandemics of bubonic plague in 1894 and of influenza in 1918.[43] Such problems are challenges to the modern epidemiologist and their solution would advance his science. History will no longer claim to explain the mechanism of disease, but historical pathology is a great reservoir whence scientific questions arise. Why did leprosy begin to

[42] H. Haeser, *Historisch-pathologische Untersuchungen*, erster Theil, Dresden u. Leipzig, 1839, p. X f.

[43] Cf. C.-E. A. Winslow, *The conquest of epidemic disease*, Princeton University Press, 1943, p. 233.

decline at the end of the Middle Ages? Was it because the strict rules of isolation checked its spread, or because the " black death " had exterminated the inmates of many leprosaria? [44] And why did the plague itself retreat from Europe at the beginning of the 18th century? Was it because of a change in the rodent population? Why is there no description of small-pox to be found in the Hippocratic collection? Did this disease pass unrecorded in the books which have come down to us or did it not exist then? Why, on the other hand, was syphilis called a new disease at the end of the 15th century? Had it always existed in Europe without being recognized as a specific entity, or had it really been imported by the crew of Columbus to flare up as a violent epidemic for several decades? How was malaria overcome in the Mississippi valley? Was this due to some drug, some special sanitary measure, or to a combination of many factors including the staunch spirit of the pioneers who would not yield the ground they had occupied? [45] It is obvious that the answers to these and many similar questions have a bearing on almost all aspects of modern epidemiology.

For some time at least, the rise of bacteriology imposed restrictions upon the study of epidemic diseases.[46] Since these diseases were identified with infections, diseases which are not transmitted by microorganisms fell outside the scope of the epidemiologist. This group included some purely somatic illnesses like scurvy, ergotism, etc., and above all mental illnesses like mass neuroses. Besides, the search for the mechanism diverted many epidemiologists from the interdependence of epidemic disease and culture. The historical pathologists of a hundred years ago had not separated the somatic, mental and cultural aspects. Hecker's essays on the psychic epidemics of the Middle Ages, dancing mania, tarantism, etc., have remained classics. And Virchow, with a political aim in view, wrote in the revolutionary year of 1848: " History has shown more than once how the fate of the greatest empires was determined by the state of health of the nations or of the armies, and it is no longer doubtful that the history of epidemic diseases must form an inseparable part of the cultural history of mankind. Epidemics resemble great warnings from

[44] Cf. H. E. Sigerist, Der Aussatz auf den Hawaiischen Inseln, *Verhandlungen der Schweizer. Naturforschenden Gesellschaft*, Thun, 1932, pp. 452-453.

[45] Cf. E. H. Ackerknecht, *Malaria in the Upper Mississippi Valley 1760-1900*, The Johns Hopkins Press, 1945 [Supplements to the Bull. Hist. Med. no. 4].

[46] Cf. Temkin (above, note 39), p. 96 ff. Cf. also I. Galdston, Humanism and public health, *Bull. Hist. Med.*, vol. 8, 1940, pp. 1032-1039, and The epidemic constitution in historic perspective, *Bull. New York Acad. Med.*, vol. 18, 1942, pp. 606-619.

which a statesman in the grand style can read that a disturbance has taken place in the development of his people, a disturbance which not even a carefree policy may longer overlook." [47]

The psychic epidemics of the past supply a large material for the study of abnormal human behavior. Here indeed, history reveals forms of disease which may not be observable at present. In the late Middle Ages, thousands of men and women roamed over some districts, dancing and leaping until they collapsed in a state of utter exhaustion. In this form, the dancing mania does not exist among the civilized nations of today. Such strange behavior must have had its causes in the social and cultural conditions of those past centuries. Elucidation of these causes would broaden our understanding of the possible reactions of man to the milieu in which he lives. Again, we know that as late as the 17th century, cases of possession occurred frequently and were still regarded as a religious phenomenon. In the clinic of Charcot, some sixty years ago, they were considered an atavistic form of hysteria, and seem now to have become relatively rare. No theory of hysteria can be considered valid which does not account for all its forms, past and present. It was for this reason that Charcot and his pupils studied the past, not from mere historical curiosity, but as clinicians who wished to define the disease entity of " grande-hystérie." [48] But to be of value, historical studies in these domains must broaden out into the political, social, economic and cultural conditions of the time. They must aim at understanding the medical phenomenon against its own background and not merely in the light of present day concepts.

Epidemics, whether somatic or psychic, are but paradigms for the general theme of " Civilization and Disease." [49] Since man never lives outside some form of civilization, all his diseases are influenced by it to some degree. On the other hand, his diseases in turn influence civilization. It is obvious that the general historian has to count with this factor. No history of the Middle Ages can by-pass the epidemic of the " black death " which is supposed to have killed one-fourth of Europe's population in the 14th century.[50] But to the physician this factor means that

[47] R. Virchow, *Gesammelte Abhandlungen aus dem Gebiete der öffentlichen Medicin und der Seuchenlehre*, 1. Bd., Berlin, 1879, p. 22.

[48] Cf. O. Temkin, *The falling sickness*, Baltimore, The Johns Hopkins Press, 1945, p. 321.

[49] Cf. H. E. Sigerist, *Civilisation and disease*, Ithaca, N. Y., Cornell University Press, 1943.

[50] Cf. J. F. C. Hecker, *The epidemics of the Middle Ages*, transl. B. G. Babington, London, The Sydenham Society, 1844, p. 30.

the study of historical pathology may better qualify him to recognize, prevent and cure some of the ills which beset our own culture.

7.

From the 18th century on, the pragmatic history of medicine was guided by the idea of progress; yet although this idea remained inherent, the scope of pragmatic history broadened in other directions. Daniel Le Clerc had already said: " This history must enter into the spirit of each century and of each author, report faithfully the thoughts of all, leave to everybody what is his." [51] On the one hand, the pragmatists of the 18th century saw the history of medicine as a process dependent on political, geographic and social conditions as well as personal achievements. But on the other hand, they rationalized the causal connections in the fashion of Enlightenment.[52] Towards the end of the century, Sprengel defined pragmatic history as follows: " History is pragmatic if it makes us wise. And it does make us wise if it stimulates us to reflexions about the step by step development of human reason, to a better understanding of medical doctrines, to the utilization of attempts at fathoming truth even though they were in vain, and to a correction of our own system." [53] The causes of the development, according to Sprengel, could only be found in the history of the culture of the human mind, and the dominating philosophical systems above all gave the key to an understanding of medical opinions. The history of science, external circumstances, and the lives of the physicians should not be neglected, but basically they were of secondary importance. The emphasis on philosophy is to be expected from the contemporaries of Kant, Fichte, Schelling and Hegel. Besides, the history of medicine is not understandable without a knowledge of the history of philosophy. Just as Galen depended on Plato and Aristotle, so the iatrophysicists and iatrochemists—the forerunners of the modern physiologist—depended upon the mechanistic philosophy of Descartes. The close ties between medicine and philosophy were loosened during the 19th century and physicians became increasingly prejudiced against philosophy. It was then that the history of medicine preserved a knowledge of fundamental human thought for the student of medicine and it still does so today.

[51] Le Clerc, *op. cit.* (above, note 34), preface ** 2 v.

[52] Cf. Diepgen, *op. cit.* (above, note 1c).

[53] K. Sprengel, *Versuch einer pragmatischen Geschichte der Arzneykunde*, erster Theil, dritte umgearbeitete Auflage, Halle, 1821, p. 4.

Nevertheless, Sprengel and his immediate successors tended to overemphasize philosophy to the neglect of other factors. These shortcomings have gradually been corrected by the medical historians of the last 150 years. With a deepened understanding of the history of religion, the cult of Asclepius and other healing miracles ceased to be explained as frauds imposed on the credulous by the priests. An appreciation of the history of art showed the significance of Leonardo da Vinci, Stephan of Calcar and other artist-scientists. The discovery of ancient Egyptian papyri and of Babylonian medical texts put the early history of medicine on a firm ground. Archaeological studies revealed many details of the every day life of the peoples and thereby opened a new vista into the history of hygiene and medical customs. The history of science was cultivated more vigorously than before and, in turn, shed much light on the neighboring disciplines of medicine. In recent years particularly, the sociological approach has made possible many new interpretations of the past as well as of the present. The Hippocratic physicians are now seen in their historical reality as craftsmen who had to compete among themselves and against the distrust of laymen.[84] The rise of surgery from the Middle Ages is intimately bound to the rise of those classes which valued trade and practical usefulness more than a metaphysical insight into an ordered and static universe. We are aware how in our own days modes of practice are changing and new branches of medicine developing under the stress of industrialization, war, modifications in the composition of age groups, shifting economic conditions, etc. And here again the situation resembles that regarding philosophy. Medical history itself has become broader in outlook and richer in content. At the same time, by connecting the development of medicine with political history, history of religion, fine arts and science, archaeology, sociology and economics, the history of medicine keeps its students in touch with the humanities and social sciences. The history of medicine, therefore, represents the humanities and social sciences in medicine and especially in medical education.

This educational value of medical history was very clearly recognized by the historians of the last century. In 1889 Theodor Puschmann, professor of the history of medicine at the University of Vienna, made a plea for the encouragement of medico-historical studies. His plea was provoked by the almost complete neglect of history by the leading medical

[84] Cf. L. Edelstein, *Περὶ ἀέρων und die Sammlung der hippokratischen Schriften*, Berlin, Weidmann, 1931.

men and institutions of the time, a neglect which bordered on contempt. This state of affairs induced Puschmann to make the following point:

> The use of historical studies manifests itself in three ways: First, they complete general education; then, they form the foundation of professional knowledge and fortify it; and finally, they further the education and ennobling of the character.
>
> When the history of medicine and of the sciences is seen as a part of the general history of culture and is thus presented, when the teacher follows its relation to the other arts and sciences, and, vice versa, calls attention to the influence of the latter on natural science and medicine, when he considers at once political events and social conditions, and gives to the whole the characteristic aura of the age, his lectures will complement and broaden the education of the students in every way.[55]

Participation in the general culture of the time through a many-sided understanding of the evolution of medicine, this was perhaps the highest point which the pragmatic history of medicine reached. It was free from immediate utilitarian purpose and yet it was still a part of the pragmatic program. For even here, medical history was seen from the point of view of usefulness—if not for the progress of medical science directly, then at least for the general education and culture of the physician and the prestige and intellectual alertness of the profession.

When Puschmann complained about the lack of interest in medical history, he was probably unaware of the very lively interest that was developing in this country. In the same year of 1889, William Osler assumed his duties at the newly opened Johns Hopkins Hospital and immediately began to impart his own historical interest to his students and associates. The Johns Hopkins Medical History Club was organized and the beginning was made of what has become a tradition. Osler was not a professional historian; nevertheless medical history was not a mere hobby to him, for it was not separated from his main work. Osler neither edited ancient texts nor did he make any startling historical discoveries. He and his pupils often were satisfied with discussing men and books already well known. Yet medical history was a living part of Osler's work as a clinician and a teacher. If the biography of a great doctor makes him a teacher of later generations, then the life of William Osler teaches how medical history can become an integral part of a physician's work.

The tradition which Osler helped to plant and William H. Welch to cultivate became a strong moving force for the establishment of a medical library connected with an institute of the history of medicine. By 1929,

[55] T. Puschmann, Die Bedeutung der Geschichte für die Medicin und die Naturwissenschaften, *Deutsche med. Wchnschr.*, vol. 15, 1889, p. 817.

when the William H. Welch Medical Library of The Johns Hopkins University was dedicated and the chair of the History of Medicine inaugurated, medicine was no longer the unified science and art it had been throughout the greater part of the 19th century. The many specialties had developed rapidly and had begun to lead an independent life. Harvey Cushing, one of the main speakers at the dedication exercises, summed up the situation in these words:

> More and more the preclinical chairs in most of our schools have come to be occupied by men whose scientific interests may be quite unrelated to anything that obviously has to do with Medicine, some of whom, indeed, confess to a feeling that by engaging in problems that have an evident bearing on the healing art they lose caste among their fellows. They have come to have their own societies, separate journals of publication, a scientific lingo foreign to other ears, and are rarely seen in meetings of medical practitioners with whom they have wholly lost contact.[56]

To counterbalance this state of affairs was one of the reasons for establishing a centralized medical library permeated by the spirit of historical teaching and research. It was felt that the history of medicine would not only strengthen the humanistic side of medicine but would, moreover, form a synthesis for the many branches of medicine.[57] This feeling was shared by many men in this country and Europe alike. The history of medicine extends over the whole breadth of medicine and through its whole past. From the vantage point of history, medicine can be seen as a whole. And if this viewpoint is imparted to students and doctors, then they too will keep it a whole. To understand medicine as a whole and to preserve it as a whole, this has become one of its useful tasks in an age of specialization.

But the same process which during the last 60 years was preparing a new task for the history of medicine also threatened to engulf it. While most medical scientists were indifferent to historical studies, others outside the profession had become interested in the historical aspects of medicine. If it was true that medical history had branched out into many fields of the humanities, it was equally true that scholars in these fields had turned towards medical works. For the Egyptologist, a medical papyrus was an interesting document of Egyptian literature, language and culture. Ebers and Breasted, to name but the editors of the two most important medical papyri, were not physicians. Greek and Latin medical authors had formerly been cultivated chiefly by doctors. Now

[56] H. Cushing, The binding influence of a library on a subdividing profession, *Bull. Johns Hopkins Hospital*, vol. 46, 1930, p. 35.

[57] Cf. *Bull. Johns Hopkins Hospital*, vol. 46, no. 1, 1930.

classical scholars in increasing number turned to the works of Hippocrates, Galen, Soranus, Celsus and others. Before World War II, new standard editions of Greek and Latin medical books were being published and there were very few doctors among the editors. The list could easily be enlarged by many examples from other periods up to the interpretation of the modern history of medicine.[58] It is easily understandable that usefulness for medicine was not the main goal of these scholars. And medical men themselves began to lose sight of the pragmatic value. The better trained they were in historical disciplines, the more they became attracted by the interest in the subject matter itself. No doubt, the older pragmatists too had devoted themselves to detailed philological and historical investigations. Yet they had felt it necessary to justify their work as ultimately useful to medicine. Now the possible usefulness was by no means forgotten but it assumed a secondary place. A characteristic illustration may be given by the fate of Pagel's "Einführung in die Geschichte der Medicin." Julius Pagel published this work in 1898 and in the first chapter he gave one of the most comprehensive outlines of the pragmatic point of view. After his death, the book was revised by Karl Sudhoff and in the last edition of 1922 this chapter does not appear.

In Germany above all, the history of medicine became an independent discipline. Its aim was the understanding of the past for the sake of historical knowledge. It did not matter whether the knowledge gained could in any way be directly related to present day medical problems, nor whether the workers in the field were physicians. The only thing that mattered was the soundness of the method used and the reliability of the results. The history of medicine tended to become a branch of the history of civilization, rather than of medicine.

It is not the task of the present essay to discuss the usefulness of medical history at large. Disease and its cure have always played a great rôle in the history of human civilization, and the general historian, the sociologist and the modern statesman are aware of this. It would be neither possible nor desirable to make medical history the exclusive domain of the physician. But it has to be admitted that from the medical point of view this development includes the danger that the history of medicine may become an aloof specialty. This danger was expressed by Harvey Cushing in 1929 in his dedicatory address when he said: "Will this foundation merely mean still another group of specialists having their

[58] Cf. R. H. Shryock, *The development of modern medicine*, Philadelphia, University of Pennsylvania Press, 1936.

own societies, organs of publication, separate places of meeting, separate congresses, national and international, and who will also incline to hold aloof from the army of doctors made and in the making?" [59]

This question is a serious challenge to the medical historian and the medical profession. For the physician who has made history his life task, it means that he must not allow himself to be wholly absorbed by the historical interest itself. While at work he must be unhampered by any considerations foreign to the subject he is investigating. But he must also be able to account for the pragmatic value of the subjects he chooses. In method he will be a historian but in aim a physician. For the medical profession it means that the history of medicine must not be starved by lack of sympathy for thorough historical method. If the historian and the profession alike are convinced of its usefulness, the history of medicine will play its part in the future development of medicine.

II.

The author of the Hippocratic book "On Ancient Medicine" argued that medicine, having existed as of old, did not have to be based on newly invented theories. All that mattered was to follow in the path of the old medicine in such a way as to satisfy the needs of the present. A similar case can be made for medical history. The history of medicine has developed many forms, each of them useful now as before. All that remains is to show that in our own time a situation has arisen which makes medical history not merely a useful, but a needed subject in medicine, and imposes some special duties on the historian of medicine.

1.

It is common knowledge that in the 19th century the classics dominated all higher education, whereas today heavy emphasis is placed on science. This change may be ascribed to two closely allied causes. In the first place, the social and political development of most countries has democratized the basis of education. Not so long ago, the difference between "the educated" and "the uneducated" was one of quality, the educated having acquired knowledge of things (above all of classical languages) which lay outside the scope of the majority of the people. Today, the difference tends to become one of degree, the educated knowing more of the things which are considered to be of practical value and, therefore,

[59] H. Cushing, *op. cit.* (above, note 56), p. 38.

desirable for all. In addition, many educators and scientists have pleaded for a replacement of dead learning by instruction in physics, chemistry and biology. However this may be, the fact remains that the change took place and that it affected premedical education too. It is fair to state that a generation of physicians has grown up who know no Greek, and little Latin, and who have not always replaced the knowledge of the classical languages by a better knowledge of the living ones. Generally speaking this process seems to be the same everywhere in the world.

Whether the ascendancy of scientific over philological training has been altogether desirable is a moot question not to be decided here. But even if deemed necessary, the decline of philological education constitutes a loss. It has often been pointed out that without a knowledge of Greek and Latin, the medical student cannot even understand the meaning of the terms he uses. This is undoubtedly true and may also explain some of the solecisms in medical writing.[60] But the essential loss is to be found at a deeper level and involves more than the decline of the classics. It is connected with the function of philology in its broadest sense. Philology is the study of language, and language is the medium through which " meaning " is conveyed in words from person to person. Philology, therefore, is the study of the means by which we can understand or make ourselves understood. Since there exist many languages, philology has many provinces. But whether we study our native tongue or try to master a foreign language, the goal remains the same, viz. to understand what we hear or read and to make ourselves understood. Everybody becomes a student of philology in early childhood when he learns to speak, and the formal studies in school help to deepen and broaden our philological education. Fundamentally, philological education is not bound to the learning of foreign languages, and can be achieved in the mother tongue as is evidenced by the ancient Greeks and by many modern poets besides Shakespeare who knew little Latin and less Greek. The advantage of making the classics the training ground of this education lies in the fact that these languages are dead and belong to a culture which in historical perspective can be seen as a whole. They necessitate a careful and accurate study, sentences have to be analyzed and the meaning of each word closely evaluated. Even sixty years ago, probably few students of medicine could read Hippocrates and Celsus without the help of grammar and dictionary. But they knew what language meant and how books should

[60] For examples cf. M. Fishbein, *Medical writing*, Chicago, Press of the American Medical Association, 1938.

be read and written. It is hard to escape the impression that this ability has declined since the days of Osler.

This diagnosis, if correct, has some direct bearing on medicine. In an address on "Books and Men" in 1901, Osler drew attention to the ever increasing number of books, and the difficulty of coping with it.[61] Since then, the number has increased tremendously, and it has become a commonplace to say that even a specialist cannot keep abreast of the literature in his own field. For this reason, information through abstracts and survey reviews has become increasingly important. But the need has also grown for the individual doctor to see the main points essential for his own work in books and articles. If his literary ability, both receptive and expressive, is lowered, this will result in the rise of a group of literary specialists who will read for the others and tell them what they should know. This in turn will result in a shrinking of the horizon of the medical investigator and may gradually reduce him to the level of a narrow technician.

What is true of medical publications holds good to an even higher degree with regard to literature that is not technical. To read philosophical, historical and poetical works profitably is in itself an art that has to be cultivated. Good books need good readers. There will hardly be any doubt that the physician should be a highly cultured person. But some doubt may be expressed whether the decline of philological education will leave him a favorable chance.

The knowledge of Greek has gone with the snows of yesteryear and Latin is in a fair way of following. There is no point in bewailing what at present has to be accepted as a fact. Perhaps the future will bring a revival of classical studies, as the past has often done before. Latin and Greek have had an eventful history and have proved adaptable to many conditions. Some day they may also find their place in a democratized society; or possibly, their educational function will be taken over by modern languages or even by an intensified study of the vernacular. These are broad issues which will not be decided by the exigencies of medicine alone. Therefore, the question arises as to how medicine can satisfy its own needs and preserve or enhance the literary ability of the physician.

In his above mentioned address, Osler made a remark which may be taken as a hint for a solution. "There should be in connection with every library a corps of instructors in the art of reading, who would, as

[61] W. Osler, *Aequanimitas, with other addresses to medical students, nurses and practitioners of medicine*, Philadelphia, P. Blakiston's Son and Co., 1904, p. 220 f.

a labour of love, teach the young idea how to read." [62] Now books are the tools of the medical historian, and the extraction of their meaning his main work. He is in frequent commerce with the classical books of medicine, and what better texts could be chosen for a study of medical reading than the classics of all times? [62a] Not so very long ago, some of the old universities required their medical students to interpret a passage from Hippocrates, Celsus or some other ancient authority. This was a survival from the Middle Ages, when interpretation of the authors constituted the better part of medical instruction. Today, medicine is taught by interpreting nature, not books. But the art of interpreting classical works, ancient or modern, and in the vernacular of course, should not be lost. Much history and, perhaps, physiology too could be learned from a careful analysis of Harvey's " De motu cordis " in an English translation. No word and no thought should remain unexplained, a difficult yet very fruitful task. The student will acquire a better understanding of the foundation of experimental physiology, his attention will be drawn to the interplay of Aristotelian and modern ideas, and above all, he will be impressed by how much a little book may have to tell, quite apart from its " results."

If it is agreed that the knowledge of medical literature is useful and that, moreover, the history of medicine should be the connecting link with the humanities, then it is certainly up to the medical historian to teach how access to both is to be gained.

2.

Medical history represents the humanities as far as they affect medicine or are affected by it. This implies mainly history itself and the historical aspects of language, sociology and philosophy. No more need be said about history itself, and language has just been dealt with. Sociology and philosophy, however, deserve some further comments.

Looking back into the history of medicine, one sees that in most periods physicians had to reckon with the social conditions under which they worked. In Greek and Roman antiquity, the prevention and treatment of internal diseases rested largely on a strict personal regimen. Dietetic medicine in the broadest sense dictated to the citizen what he should eat and drink, how he should work and sleep and what exercise he should take. However, the physician was aware that only a rich man of leisure

[62] *Op. cit.*, p. 221.

[62a] H. E. Sigerist, Classics of medicine, *Bull. Hist. Med.*, vol. 16, 1944, pp. 1-12.

could regulate his mode of life according to the dictates of his medical attendant. The poor man who had to work for his living could not afford the luxury of adapting his life to his health.[63] During the Middle Ages and the Renaissance, princes and great noblemen had their body physicians among whom the tradition of dietetic medicine remained alive. Poor people went to a leech, a barber or to some old woman. In the cities which employed town physicians conditions were somewhat more even, but in the country the peasants were dependent on home remedies or itinerant quacks. The fact that books like the "Thesaurus pauperum" were written, that the "School of Salerno" was translated into the vernacular, and medical advice propagated through many popular writings attests some awareness at least of prevailing social factors. From the 18th century on, when Ramazzini published the first comprehensive monograph on occupational diseases and Tissot wrote his "Advice to People in General with Respect to Their Health," through the 19th century to our own times, the complexity of social relations in medicine has increased, until now it draws attention from many sides.[64] The surroundings of the individual patient, the "milieu" from which he comes and the conditions under which he lives, mark his disease and the chances of his recovery. The prevention or eradication of certain illnesses, e. g. venereal diseases, rests preeminently on social possibilities. The treatment that a patient receives is not independent of his ability to pay for it. The density and wealth of the population influence the number of doctors and hospitals available and, in turn, influence the mode of practice. These are but a few instances of social and economic aspects that have become increasingly important, and of paramount interest. They have led to political debates inside and outside the profession about the desirability of individual practice, health insurance and state medicine. As a result, there is a mounting trend to demand instruction in medical sociology, economics and ethics.[65] For it is rightly felt that knowledge in this field has become as important as knowledge of the traditional scientific branches of medicine.

Medical sociology and economics can be studied on the basis of existing conditions. Surveys of the cost of medical care, of hospital facilities, of the medical needs in rural districts, etc., are made in great numbers. Information is compiled on the forms of health insurance in various

[63] Cf. L. Edelstein, Antike Diätetik, *Die Antike*, vol. 7, 1931, pp. 255-270.

[64] Cf. H. E. Sigerist, *Medicine and human welfare*, New Haven, Yale University Press, 1941.

[65] Cf. *J. A. M. A.*, vol. 129, 1945, p. 464.

states and countries. The existing facilities for medical education and research are examined with a view to the future needs for an intensified attack upon disease. All this can be done, and often is being done, with little regard to the way in which existing conditions have developed. Yet if the historical aspect is neglected, present conditions will not be *understood*, just as the structure of the adult body will not be *understood* without embryology, the history of its development. The "Goodenough Report" [66] which in 1944 was brought out under the auspices of the British government, may be cited as an example of what is meant. This report surveys the organization of medical schools in Great Britain and contains recommendations for future reforms. Far-reaching as many of its proposals are, they are not marked by any bias in favor of medical history.[67] But in its survey of the medical schools of the University of London, and in many other instances as well, sections on the historical development had to be inserted in order to make the present situation understandable.

It does not follow that medical sociology and economics have to be entrusted to the historian of medicine. But on the other hand, the historian cannot be excluded. It is very likely that all clinical disciplines and some of the basic sciences too, will be increasingly imbued with social thought. This in turn will mean that teachers, investigators and practitioners will have to acquire the habit of thinking along historical lines. The history of medicine is not and cannot be taught by the few men who have made it their specialty. Nobody is able to know the entire past of medicine in all its details. Historical teaching must be diffused through the instructors of all branches and specialties. For the so-called professional historian remains the task of teaching the main lines of the development of medicine as a whole in relation to all humanistic disciplines and of imparting a sound knowledge of historical methods to his students. Whatever else he may do as a teacher or scholar will largely depend on special circumstances and his personal inclinations. His position will be similar to that of the pathologist who is not the only one to teach or investigate pathological problems.

Now this holds true too of medical sociology and economics. If medicine is to be understood as a whole, then certainly its social and economic development, up to the present, forms a very essential part of the history

[66] Ministry of Health, Department of Health for Scotland, *Report of the Inter-Departmental Committee on Medical Schools*, London, His Majesty's Stationery Office, 1944.

[67] It seems as if University College Hospital Medical School alone emphasized the need for historical instruction; cf. *op. cit.*, p. 299 ff.

of medicine. Consequently, the historian of medicine will be able to show how social and economic problems should be approached historically. Everything else will then be up to those who have to cope with these questions in their clinical or scientific work or who make them their special task.

Medical sociology and economics as a special discipline are as yet in a state of emergence. Thus it is understandable, that in some cases they are directly combined with medical history, since there exists a certain mutual affinity. But such a union does not appear necessary. What seems needed is that this new discipline should not be left without a historical basis—a basis which the medical historian will have to supply.

3.

Medical sociology and economics as discussed in the preceding section have their position inside medicine. They are assumed to further the aims of medicine by unveiling the social conditions that breed disease, and the ways and means that bring medical care to the widest possible stratum of society. There exists, however, a broader aspect from which medicine and its aims as a whole are seen against the background of society. Here the question arises as to what part medicine plays and should play in our civilization. To raise this question means to look at medicine not only from the point of view of history and sociology, but of philosophy as well.

It may be doubted whether this is a question which a medical man should raise at all. By joining the medical profession he has made the prevention, cure and alleviation of disease his avowed goal. "'Tis no idle challenge which we physicians throw out to the world when we claim that our mission is of the highest and of the noblest kind, not alone in curing disease but in educating the people in the laws of health, and in preventing the spread of plagues and pestilences; nor can it be gainsaid that of late years our record as a body has been more encouraging in its practical results than those of the other learned professions. Not that we all live up to the highest ideals, far from it—we are only men. But we have ideals, which mean much, and they are realizable, which means more." [66] These words of Osler, spoken in 1894, mean that the doctor at least can march ahead in the knowledge of doing good. The creed which they express is certainly still alive, and has given medical men a stronger moral support than many other scientists possess today. The

[66] W. Osler, Teaching and thinking, *op. cit.* (above, note 61), p. 125.

question of the social implications of scientific discoveries, especially in physics and chemistry, has become a very acute one, and has reached the level of popular debate. But the physician seems to be secure in the use of his researches; they serve the advance of health and are, therefore, eo ipso good. Even in wartime the doctor has the satisfaction of saving the life of friend and foe—though it should perhaps not be quite forgotten that without the advances made by modern medicine, modern warfare with its huge accumulations of men threatened by epidemic disease would also scarcely be possible.

The firm self assurance of medicine rests on the assumption that life and good health are values. It may be justified to consider these assumptions as natural, since they seem to have their roots in the biological nature of animal and man. But in the historical realm of human culture, these assumptions no longer appear as self-evident. During the Middle Ages life was but a preparation for eternity, and the health of the body of no intrinsic value. Martyrs and saints sacrificed both willingly in order to save their immortal souls. Such at least was the religious and philosophical outlook even if the every day behavior of most people did not live up to it. With Bacon and Descartes the 17th century strikes a different note. From early youth it was Descartes' aim to acquire knowledge of things "useful for life." [69] Having worked out his new philosophical method, he decided to communicate it to the world in order to further the welfare of mankind and to make them masters over nature. For this is desirable "especially for the conservation of health which is, without doubt, the primary good and the basis of all the other goods of this life; for even the mind depends so much on the temperament and the disposition of the organs of the body that if it is possible to find some means of making men generally wiser and abler than they have been heretofore, I think it must be sought in medicine." [70]

Descartes expressed an idea which has grown since his time until today it threatens to transcend into the realm of religion. Descartes valued health because everything in our life, even the state of our mind, depended on it. Yet he still recognized an immortal life of the soul. With the unchecked rise of materialistic utilitarianism, the welfare of the body is becoming an absolute value. If man no longer believes in the immortality of his soul, he yearns to make his body immortal.[70a] There exists a

[69] R. Descartes, Discours de la méthode, *Oeuvres de Descartes*, publiées par C. Adam et P. Tannery, VI, Paris, 1902, p. 4.

[70] *Op. cit.*, p. 62.

[70a] Cf. A. E. Clark-Kennedy, *The art of medicine in relation to the progress of thought*, New York, Macmillan, p. 45.

belief in health as there existed a belief in values of the spirit. Naturally then the physician becomes the apostle of this faith. He must be more than the expert in matters of health and the medical adviser of the nation. He must be permeated with the "*belief* in the importance of health and the prevention of disease." [71]

This may be the vision of an emerging trend rather than of a prevailing condition. Nor is it up to the doctor to belittle the importance of health. But even for the physician it is permissible to point out that the value which health represents has to compete with other values in our life. To believe in health is one thing, to forget that there are things (like freedom, search for truth and dignity of existence) for which health may be worth sacrificing, is quite another. It can hardly be denied that in our time values are unsettled and that man is faced with the necessity of making personal decisions where tradition and habit often used to decide for him. What place the preservation of health should have in our scale of values rests on a decision which no educated person, and the doctor least of all, can evade facing consciously and thoughtfully.

Decisions must be made, they cannot be taught. The history of medicine even in its widest and most philosophical sense cannot teach what should be done. But it can help to understand the present so that the future can be faced more clearly. If we compare our own medical thought with that of Antiquity or the Middle Ages, we get to know ourselves by the contrasts and similarities we discover. This is perhaps one of the greatest rewards which the study of an old culture has to offer. We are faced with a system of medicine that differs from ours not in positive knowledge only, but in social conditions, philosophical thought and ethical aim as well. For instance, if one compares the Hippocratic Oath with modern codes of medical ethics, one sees that some of the postulates of the Oath are obsolete, while others survive. We no longer treat our teachers like our own parents, nor do we foreswear operative surgery. But we still abstain from revealing the patient's secrets and from assisting him to kill himself or his progeny. On the other hand, we have an ethical attitude towards the fellow members of our profession and the welfare of the community at large—features which began to develop only in the medieval faculties and surgeons' guilds. Thus we become aware of the differences which separate us from the past and, thereby, we realize our peculiarity. And by inquiring into the development that led to the present state we discover the forces that have shaped

[71] Goodenough report (above, note 66), p. 25 (italics are mine).

us and the trends that may reach into the future. So much the history of medicine can do to render its student conscious of the situation in which he lives. Moreover, by acquainting him with philosophical thought, it can show him the intellectual instrument that may help him reach his own decisions.

Medicine and the preservation of health have assumed an importance as hardly ever before. This means that the physician too has to shoulder responsibilities more far-reaching than before. This rôle of leadership requires an education to which the history of medicine has something substantial to contribute. Its last aim was expressed by Oliver Wendell Holmes when he spoke of the danger faced by the " practical man."

> There are, of course, in every calling, those who go about the work of the day before them, doing it according to the rules of their craft, and asking no questions of the past or of the future, or of the aim and end to which their special labor is contributing. These often consider and call themselves *practical men*. They pull the oars of society, and have no leisure to watch the currents running this or that way; let theorists and philosophers attend to them. In the mean time, however, these currents are carrying the practical men, too, and all their work may be thrown away, and worse than thrown away, if they do not take knowledge of them and get out of the wrong ones and into the right ones as soon as they may. Sir Edward Parry and his party were going straight towards the pole in one of their arctic expeditions, travelling at the rate of ten miles a day. But the ice over which they travelled was drifting straight towards the equator, at the rate of *twelve* miles a day, and yet no man among them would have known that he was travelling two miles a day backward unless he had lifted his eyes from the track in which he was plodding. It is not only going backward that the plain practical workman is liable to, if he will not look up and look around; he may go forward to ends he little dreams of. It is a simple business for a mason to build up a niche in a wall; but what if, a hundred years afterwards when the wall is torn down, the skeleton of a murdered man drop out of the niche? It was a plain practical piece of carpentry for a Jewish artisan to fit two pieces of timber together according to the legal pattern in the time of Pontius Pilate; he asked no questions, perhaps, but we know what burden the cross bore on the morrow! And so, with subtler tools than trowels or axes, the statesman who works in policy without principle, the theologian who works in forms without a soul, the physician who, calling himself a practical man, refuses to recognize the larger laws which govern his changing practice, may all find that they have been building truth into the wall, and hanging humanity upon the cross.[73]

This was said in 1860, more than 85 years ago. Today there is still no more forceful way of expressing the usefulness—and need—of medical history for medicine.

[73] O. W. Holmes, Currents and counter-currents in medical science, *Medical essays*, 1842-1882, Boston and New York, Houghton, Mifflin and Co., 1891, pp. 175-177.

TEXTS AND DOCUMENTS

THE JETONS OF THE DEANS OF THE OLD FACULTY OF MEDICINE IN PARIS

SARAH ELIZABETH FREEMAN

No single group of medical medals, one might even say medals, has been the subject of so many *different* articles and books by so many *different* authors, as have the so-called "Jetons des doyens de l'ancienne Faculté de Médecine de Paris."[1] Different has been deliberately underscored. With few exceptions, each numismatist or medical historian who has succumbed to the urge to comment publicly upon the subject has seemingly taken especial pains to avoid more than a casual mention of at least his most immediate predecessors. This may be due, and in one instance was certainly due, to an understandable hesitancy to call the reader's attention to what might, with some justification, be considered plagiarism. The universally recognized numismatic vocabulary, however, does not permit much variation in the technical description of a coin or medal, and the reader should expect, indeed should be thankful, for repetition, even verbatim. In lieu of any other means of identification, such repetition offers the only proof [we hope] that two or more different pieces are identical in type. Verbatim transcription of errors, often directly refuted by accompanying illustrations, however, even though a sure proof of type, is certainly a bit immoral. The time has now come, it seems to the present author, once again, and perhaps for the last time, to take up the

[1] For example: Hyac.-Théod. Baron, *Historia metallica Facultatis Medicinae parisiensis* . . . (Paris, 1754); "Histoire (par les jetons) de l'ancienne Faculté de Médecine de Paris," *Magasin pittoresque de Paris*, 1857, 1858, *passim*; Achille Chéreau, "Les méreaux et jetons de l'ancienne Faculté de Médecine de Paris," Feuilleton de *l'Union Médicale*, 1873; Hippolyte Kluyskens, "Les jetons et les médailles de la Faculté de Médecine de Paris aux XVII^e^ et XVIII^e^ siècles, *Revue belge de numismatique*, XL, 1884, pp. 275-288; A. Corlieu, "Les jetons des doyens de l'Ancienne Faculté de Médecine de Paris d'après le médaillier de la Faculté," *Bulletin de l'Académie de Médecine*, XVII, 1887, séance du 28 juin; R. Blanchard, "Les jetons des doyens de la Faculté de Paris," *La France médicale*, 1901; H. Fournié, *Les Jetons des Doyens de l'ancienne Faculté de Médecine de Paris* (Châlon-sur-Saône, 1907); Madeleine Desavis, *Description des Jetons Décanaux de la collection du Professeur Gilbert avec commentaires historiques et biographies des doyens* (1638-1793), Faculté de Médecine de Paris, Thèse pour le doctorat en Médecine, 1933, No. 258; Ch. Florange, *Les Jetons des Doyens de l'ancienne Faculté de Médecine de Paris 1636-1793* (Paris, 1933).

fascinating subject of the "jetons des doyens," not so much to add anything new, but rather to correlate the old.[2]

To the best of the author's knowledge, there has been no publication on the "jetons" in English, with the exception of a very brief and generalized comment in the first volume of the *Annals of Medical History*,[3] and the description of individual pieces scattered through the *Medicina in Nummis* by Dr. Storer.[4] The latter can not be considered as a definitive work on the jetons, since the pieces are not grouped together, but are listed as "personal" mementoes of the respective deans during whose terms of office they were struck—a rather unfortunate choice of arrangement, since the value lies not in the individual pieces, but rather in the series as a whole.[5] However, since the publication of Dr. Storer's *magnum opus*, in 1931, it has become, and rightfully so, the accepted rule to cite a Storer number as the standard reference to a medical medal. It was an attempt to do this in the process of cataloguing the "jetons des doyens" in the Henry Barton Jacobs Collection of medical medals,[6] which brought forcibly to attention the necessity of correlating Storer with the earlier listings to which he refers, rightly or wrongly, with others of which he was not aware, and also the necessity of verifying and adding in their proper places the new types discovered in recent years.[7] Holzmair, in his catalogue

[2] And, we hope, to make a complete list more available to medical numismatists on this side of the Atlantic. European numismatic journals are not always at hand, and books on the subject seem to have been produced in very limited editions, few reaching this country.

[3] A. Allemann, "The jetons of the old Paris Academy of Medicine in the numismatic collection in the Army Medical Museum at Washington, D. C.," *Annals of Medical History*, I, 1917, pp. 155-158.

[4] Dr. Horatio Robinson Storer, *Medicina in Nummis, A Descriptive List of the Coins—Medals—Jetons relating to Medicine, Surgery and the Allied Sciences*, edited by Dr. Malcolm Storer (Boston, 1931).

[5] In the words of Dr. Fournié (*op. cit.*, p. 58): "Peu de séries de personnages offrent une suite aussi longue, aussi homogène, aussi expressive, aussi riche de la variété de ses indications: aussi, ne passe-t-elle pour avoir plus de valeur tant pour les chercheurs de documents que pour les amateurs de belles œuvres."

[6] Now in the Institute of the History of Medicine at the Johns Hopkins University in Baltimore. A catalogue of this superb collection of medical medals is in the process of publication.

[7] The magnitude of Storer's tremendous undertaking can not be over emphasized, but unfortunately the quantity of the result is in many instances more impressive than the quality. The re-editing of his catalogue is not eased by the order in which the medals are listed ("When there are several medals of one man they are arranged alphabetically according to the first letter of the inscription on the reverse; when there is no inscription on the reverse they are arranged according to size" [*Medicina in Nummis*, p. 43, note]), and by the again rather unique, but not objectionable if accurate, method of reference citation to an impressive list of articles and books, where the names of authors and titles

of the great Brettauer Collection, treats the jetons as a series.[8] His descriptions, however, are so laconic as usually to necessitate constant checking of the references which he cites in lieu of fuller treatment. For the " jetons des doyens " both Storer and Holzmair cite, whenever possible, as their standard reference " Fournié."

This is the definitive study of the series by Dr. H. Fournié entitled: *Les Jetons des Doyens de l'ancienne Faculté de Médecine* (1907), which was originally published as an article in the *Gazette numismatique française*.[9] To add slightly to the confusion, Storer refers to the book, while Holzmair cites the article. Fortunately, though page and plate numbers vary slightly, the consecutive numbering of the jetons has remained the same. Fournié's excellent study of this series suffers only from the discoveries made during the approximately forty years since its publication. Were it not for this new material, for the apparently limited availability of Fournié's book, and for the fact that, despite his careful examination of most of the pieces known to him in his own and other large European collections,[10] his reasoned arguments therefrom have not been unanimously accepted, have in fact in some instances been ignored, any further discussion of the series might well be considered superfluous. The most important discovery relative to the series since 1907 was " rediscovered " by the author quite by chance, while leafing casually through a borrowed volume in search of any odd bits of information that might be there, though scarcely expecting to make so rich a find. Concealed in the *Mélanges* of the *Gazette numismatic française* for 1910 was the charming Latin text of a " Histoire métallique de la Faculté," written by Dr.

have been so abbreviated that they are little more than exasperatingly useless. It might be noted that anyone who has the necessary patience, and access to the *American Journal of Numismatics*, 1889-1912, can sometimes find the earlier publication of these pieces, where exhaustive bibliographies are usually given in full. However, this is of no avail for the French medals.

[8] Dr. Eduard Holzmair, *Katalog der Sammlung Dr. Josef Brettauer Medicina in Nummis* . . . (Vienna, 1937). Dr. C. L. de Duisburg also improved upon Rudolphi by treating the decanal jetons as a series. Cf. " Jectoni facultatis medicae parisiensis," in his *C. A. Rudolphi recentiori aevi numismata virorum de rebus medicis et physicis meritorum memoriam servantia denuo edidit emendavit et auxit* (Danzig, 1862), pp. 75-91.

[9] X, 1906, pp. 225-283, and XI, 1907, pp. 1-27. This exceedingly rare and unfortunately short-lived journal is a veritable gold-mine.

[10] The outstanding collection in the Cabinet des médailles of the Bibliothèque Nationale, which includes the official—though incomplete—collection of the Old Faculty; the collection owned by the Faculty of Medicine; those pieces in the Musée de Cluny and the Musée Carnavalet, and the decanal jetons in the great Feuardent collection of French jetons, now published (cf. F. Feuardent, *Jetons et méreaux depuis Louis IX jusqu'à la fin du Consulat de Bonaparte*, I-III [Paris, 1904-1915]).

Maxime-Joseph Leys, one time professor of surgery on the Faculty, which was originally published in the *Calendarium Medicum ad Usum Saluberrimae Facultatis* (an annual Almanac) for the year 1790.[11] The pages devoted to the *Historia metallica* are reprinted in full, with a brief introduction by Henry Nocq. If it were not obvious that Fournié could have put to excellent use some of the facts contained in these pages, one might be tempted to believe that he had been aware of its contents, but had made no mention of it, in order that its subsequent publication might provide dramatic confirmation of his arguments. Indeed, the *Historia metallica* might be considered almost anti-climactic, but for the fact that in the thirty-five years since it was purportedly brought to public attention, it has scarcely been noticed.[12] For the past generation, Fournié's logically reasoned but rather daring suppositions and conclusions have been disputed or accepted, albeit at times grudgingly, while reasonably absolute proof of his arguments actually existed.

To review briefly but one instance: Fournié concluded that no jetons were struck during the terms of office of eight of the sixty-five deans.[13]

[11] Owned and re-published by Henry Nocq, who speaks of it (p. 167) as being in "notre modeste bibliothèque." For the entire article, cf. pp. 167-193, and see also next note.

[12] A mention of the discovery of the Almanac is made in connection with a discussion of the "jetons des doyens" in *Les Collections artistiques de la Faculté de Médecine de Paris, inventaire raisonné* par Noé Legrand, publié par les soins de L. Landouzy (Paris, 1911), p. 235, n. 2. We quote: "Au mois de juillet 1910, l'éminent graveur en médailles, M. Henri Nocq, trouvait sur les quais de Paris un exemplaire du *Calendarium medicum ad usum saluberrimae Facultatis* . . . C'était le calendrier de 1789: l'opuscule contenait, en un latin très précis le Catalogue complet des jetons, de la Collection de la Faculté. M. Henry Nocq étant venu se renseigner à ce sujet à la Bibliothèque de l'École de Médecine, nous pûmes le convaincre, à sa grande surprise, qu'il avait découvert *rarem avem*. Cette pièce n'existe en effet ni à la Bibliothèque nationale, ni à celle de la Faculté, ni dans aucune autre grande Bibliothèque et, jusqu'à nouvelle information, elle peut être considerée comme unique. L'aimable et savant numismate n'hésita pas à reconnaitre avec nous l'interêt qu'il avait à publier in extenso ce précieux catalogue et nous le felicitons, en le remerciant du service qu'il va rendre aux numismates et aux historiens de la Medecine" [*sic*]. Nocq's article is also cited in a general bibliography on the jetons des doyens, though not in such a way as to reveal its importance, by A. Blanchet, *Manuel de numismatique française*, III, *Médailles, Jetons, Méreaux*, pp. 290-291, n. 5. Any other reference to the article or more especially to the *Historia metallica*, if it has appeared, has escaped our notice.

[13] Jean Piètre (1648-1650), Pierre Perreau (1686-1688), Dominique de Farcy (1700-1702), Antoine de Saint-Yon (1704-1706), Louis Poirier (1706-1708), François Afforty (1708-1710), Philippe Douté (1710-1712), and Nicolas Andry (1724-1726). In the case of Dominique de Farcy, it is an attested fact that no jeton was struck (Fournié, *op. cit.*, p. 58, n. 1). The original error in each case seems to have been due to Kluyskens. Fournié considered each case and remarks in every instance: "Kluyskens lui attribue inexactement une jeton, en se référant au *Magasin Pittoresque* de...p...., qui ne men-

Other authors, however, almost all on the basis of a misinterpretation of statements in the *Magasin Pittoresque* (cf. note 1), have presumed jetons existed for at least some. Storer lists all these pieces, though admitting the doubt.[14] And what has the Historia metallica to say? "'*Ignoratur qualis fuerit calculus*," or "*Nullum numisma*" for seven out of the eight. For the eighth, Pierre Perreau, whom, amusingly enough, no one has ever championed, Dr. Leys describes a jeton. And, as proof of his reliability, this jeton exists. A single specimen has turned up in the large collection of medical medals bequeathed to the Musée d'Histoire de la Médecine de la Faculté by Professor Gilbert, of which the "jetons des doyens" were catalogued and published as a doctoral dissertation by Mlle. Madeleine Desavis.[15]

Dr. Desavis may be correct in considering the gold jeton of Pourfour du Petit as "le plus beau jeton de la collection," but the tin jeton of Pierre Perreau is of much more value to medical history. The Gilbert collection, which includes pieces representative of fifty-four of the fifty-eight deans in whose decanats jetons were struck, has been exceedingly well described. The author has managed to produce biographical data for many hitherto almost unknown personalities. The catalogue would have been a much more valuable contribution to medical numismatics, however, if Dr. Desavis had given even merely one reference to similar types in other collections or publications, to Fournié, for instance, with whose work she was familiar. Of the book by Florange (1933), though beautifully printed and attractively bound, the less said the better, as a comparison with Fournié should reveal to the most casual reader.

Since Fournié is not widely available in either book or article, a repetition of the salient facts concerning the use and manfacture of the jetons will not be out of place. The series began in 1638, under Dean Philippe Hardouin de Saint-Jacques, replacing with machine-struck pieces the older form of token-money, "méreaux," which had been in use since 1398.

tionne pas positivement de jeton de ce doyen." Duisburg, in turn, refers to Kluyskens, and Storer to one or both of the earlier writers.

[14] Numbers 2832, 3171, 2845, 22, 876 and 72. Under St. Yon (3171), for example, Storer remarks: "Merely mentioned by these authors [Duisburg and Kluyskens], who call him Yoon and Yvon, respectively. Fournié denies the existence of this jeton." And again under Poirier (2845), with a reference to Duisburg: "Merely mentioned. Kluyskens states that this jeton is in the Bibliothèque Nationale, but no writer has been able to discover it."

[15] For the full title, see note 1, and cf. M. Laignel-Lavastine, "Catalogue du médaillier du professeur Gilbert dressé par Mlle Desavis," *Bulletin de la société française d'histoire de la médecine*, XXIX, 1935, pp. 333-338.

Méreaux had long been employed by the Church as currency, and since the Pope was the supreme head of the Faculty, and its members were strict in their observance of the rites and customs prescribed by the Church, it was natural that they should have adopted the use of token-money. These tokens served several purposes, but were mainly employed as bribes or bonuses to insure at least minimum attendance by members of the Faculty at various meetings.[16]

Freely translated in modern terms, these meetings at which attendance had to be bribed included faculty meetings, academic processions and special convocations, final examinations, and funeral masses held after the death of one of the doctors. On these occasions a certain number of the doctors, usually six, but sometimes twelve, were requested to attend. If they complied, they were each presented with a jeton, or two; those who didn't were correspondingly fined. Incidentally, anyone foolish enough to attend voluntarily received no reward. At a designated time and place, once a month, the recipients of the jetons could turn them in to the Dean for their value in coin of the realm at an established rate of exchange. Jetons also served as payment for those doctors who contributed (by request) their services in the treatment of charity cases, and as fees for the lawyers and others who did work for the Faculty. They were also awarded as prizes for exceptional scholastic achievements. In themselves, of course, the jetons were personal mementoes of the Dean during whose term of office they were struck,[17] since they were permitted to carry on one face either his coat-of-arms or his portrait.

Guy Patin, the eighth to hold office, was the first to use his own portrait on the obverse. His predecessors and a few of his immediate successors, with more modesty, had dies made up bearing their arms. The portrait bust, however, soon became the custom. At first glance, these portraits appear to be much alike, without any individual character, but this is due in great part to the similarity of costume and the prescribed

[16] The source of our knowledge concerning the use of the jetons is the *Ritus, usus et laudabiles Facultatis Medicinae parisiensis consuetudines, authoritate totius ejusdem ordinis excusa* (Parisiis, Typis G. F. Quillau, universitatis medicinae typographi, 1751), which was revised and edited by Dean Hyacinthe Théodore Baron. Cf. Fournié, pp. 24-34, and Desavis, pp. 16-25.

[17] The duration of the office was two years, but by unanimous approval a dean could be and occasionally was elected for a second or even a third term. As a general rule, new jetons were struck in the last year of a term of office; presumably those left from the preceding term were used up. On the early pieces, the date is usually to be found on the obverse; on the later, it was placed on the reverse, and rather than a single year, the inclusive years of the term are given.

format. They were considered by contemporary critics to be very realistic,[18] and were exhibited by the engravers at the Salons. The Deans were, of course, able to command the best work, and many of the pieces are signed. Outstanding are the products of the two great families, the Roettiers and the Du Viviers. Of the former, we find the signatures of Norbert, Charles Joseph and Charles Norbert; of the latter, Jean and his son Pierre Simon Benjamin, and it is to these last two that the series owes its medallic reputation.[19]

The reverse face at first carried the arms of the Faculty, a charming design, delightfully, though possibly disrespectfully treated in some of its final appearances.[20] The increasingly undignified behavior of the three storks and the varied expressions assumed by the sun are amusing details to be noted in the evolution of the series. Later reverses were, for the most part, devoted to scenes or inscriptions commemorating some outstanding event which occurred during the Dean's term of office, while others bear allegorical scenes, such as mythological combats, which are generally interpreted as indicative of the constant state of war which existed between the Faculty of Medicine, always jealous of its prerogatives, and rival groups.

But to return to the problem of correlation. At least for our own benefit, and we hope it will prove of value to future cataloguers, an attempt will be made in the succeeding pages to correlate the two catalogues compiled by Leys and Fournié, to add the old as well as the new specimens from the Gilbert, Brettauer and Jacobs Collections, and the new pieces, not otherwise published, which are listed by Storer,[21] and also to eliminate

[18] Dr. Desavis devotes considerable space to stylistic criticism, and comments upon the success or lack of it in the various portraits.

[19] Both Fournié and Desavis give brief sketches of the medallists. For additional information, cf. Leonard Forrer, *Biographical Dictionary of Medallists*, etc.; for the Roettiers, V, pp. 150-191, and for the Du Viviers, I, pp. 683-689, VI, 291-301.

[20] The arms are described as "d'azur à trois cigognes passantes d'argent sur une terrasse au naturel tenant dans leur bec une feuille d'origan; un chef, un soleil surmontant une nuée d'argent." On the jetons, we sometimes find the storks "in the field," and sometimes "in escutcheon." In the latter case, they are habitually placed two and one rather than in line.

[21] Especially those in the "Government Collection" in the Army Medical Museum, Washington, D. C. (hereinafter referred to as "Army"). Through the courtesy of the director, Colonel J. E. Ash, and with the assistance of Major Harry A. Davis, I was able to make use of the museum's as yet unpublished catalogue of their large collection of medical medals, and to inspect the medals themselves, as thoroughly as possible. The manner in which they have been mounted, though excellent for display purposes, precludes any examination of the edges, which are unfortunately of considerable importance in the establishment of authenticity. I am also greatly indebted to Dr. James F. Ballard, Director

non-existent types and duplications which occur mainly in Storer's list. Admittedly, all of the known pieces should have been re-examined, but this has, of course, not been feasible under present world conditions, and it is highly unlikely that it would ever have been completely possible, since many private collections, as, to name but one, Feuardent's, have been long since broken up and widely dispersed. We have, with few exceptions, and with complete faith, relied on Fournié's judgment for those pieces with which he is known to have been familiar.

Though there should be little cause for confusion, a few words as to the arrangement and technical terms may be in order. The authentic jetons are listed, following the order of the *Historia metallica*, when there is any choice, with the interpolation of new types in proper sequence. The known hybrids and mules are discussed and listed at the end of each decanat, the muled dies, not from the decanal series, being referred to by numbers preceded by the letter *M* (i. e., M1, M2, etc.), which in turn refers to the descriptions of the originals in the closing pages of this paper. A mule, it might be pointed out, is the resultant combination of two dies not originally intended to be struck together. The term should not be applied, however, as is often the case in Storer's catalogue, to the normal re-use of a die.

Some of these mules were undoubtedly struck at an early period, the result either of unconscious confusion at the mint, or a deliberate re-use of old dies for some purpose. Most, however, were struck much later, and quite likely with the intentional purpose of producing variants for sale to the rapidly growing number of eager and unsuspicious collectors of jetons. Those struck since 1841 must, in compliance with the law, carry the mark of the Director of the Mint and the name of the metal employed inprinted on the edge.[22] These marks, unfortunately, can be filed off or rendered difficult to detect, if an unscrupulous dealer wishes to make a piece appear to be of genuine antiquity, at first glance. If, however, the collector's suspicions are not aroused by discrepancies in dates or by meaningless combinations of dies, there remains the best criterion of the genuineness of a jeton, be it a mule or a restrike of any date. That is its

of the Boston Medical Library, for the temporary loan of some of the jetons from Storer's personal collection, which he bequeathed to the Library. It was indeed a privilege to have the opportunity to study them at first hand.

[22] These marks, which though minute are usually quite easily decipherable, are: the letter C and an anchor interlaced, the mark of M. Callot, Director 1841-1842; the prow of a boat, for M. de Cambry, 1843-1845; a pointing hand, for M. Dierickx, 1845-1860; a bee, for M. the Baron de Bussière, 1861-1879; and since 1880, when the striking has been under the authority of the Minister of Finance, a cornucopia with coins spilling out of it. Cf. *American Journal of Numismatics*, XXIX, 1895, p. 97.

method of striking. Without exception in the collections examined by Fournié and, to the fascination of the author, with almost magical regularity in all the new pieces examined, all hybrid combinations of dies and restrikes are struck direct, in the manner of a medal, rather than indirect as is money, and as are, with few exceptions, authentic jetons, which were token-money. Is it too much to hope that in future publications of jetons, the method of striking, at least in the cases when it is "en medaille," will be included in the description? It is actually the most important single observation that could be made, and one that, unfortunately, cannot be ascertained either from the best of illustrations or the most detailed descriptions of scenes and devices. A failure to admit the presence of the Director's mark, though an understandable omission in that it considerably reduces the value of a piece known to have been struck originally prior to 1841, can also hardly be condoned. It is safe to say that jetons struck direct will more often than not be found to bear an edge-mark, whereas the converse is always true.

It has not been considered necessary to give the size of each piece, since with the few exceptions noted, they are approximately identical, averaging about 28 mm. in diameter. We have also made no mention of the metals employed, except occasionally to call attention to pieces struck in gold, which are rather rare. Most of the jetons are to be found in silver and in two shades of copper, red and yellow, the latter resembling brass; some gilded pieces are also known. Finally, and needless to say, directions are, as is customary, from the spectator's viewpoint.

CATALOGUE OF THE JETONS

I. PHILIPPE HARDOUIN DE SAINT-JACQUES (1636-1638) [23]

1 *Obv*: Arms of the Dean.[24] *Legend*: from right to left, M·PHILIP·HARD-VYNO·DE·SAINCT·IACQVE·DECANO·

Rev: Arms of the Faculty: the three storks in the field, two and one. *Legend*: VRBI·ET·ORBI·SALVS· in a curve from left to right, above. Exergue: ·FACVL·MEDIC· / PARIS·1638·

Hist. met. 1; Fournié 1 = Storer 1467;[25] Desavis 1; Brettauer 2572.

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[23] We are not giving any biographical data, since this is well covered by Fournié and Desavis, or may be found in medical histories and biographies. The dates are of the decanat.

[24] It is also not considered necessary to give detailed descriptions of the personal arms. The legends are sufficient for purposes of identification.

[25] We are substituting the equals mark for the semicolon, whenever Storer's listed piece is owed to Fournié, or some other specified source, rather than being represented in his own collection.

Fournié's reading of HARDVINO, after whom Storer, is contradicted by his illustration. Leys, who gives HARDOYNO, is also wrong. Incidentally, it is impossible to say whether Dr. Leys should be held to account for the few errors in the *Historia metallica*, or whether they may have crept into the re-publication.

II. SIMON BAZIN (1638-1640)

2 *Obv*: Arms of the Dean. *Legend*: from right to left, * M * SIMONE * BAZIN * DECANO * with a rosette at top to complete the circle.
Rev: Same as number 1.
Hist. met. 2; Fournié 2 = Storer 222; Brettauer 2573.

III. GUILLAUME DUVAL (1640-1642)

3 *Obv*: Arms of the Dean, with device: LAVRI·PLVS·QVAM·AVRI in minute letters. *Legend*: from left to right, M·GVILLELMO·DV VAL·DECANO· Exergue: ·1641·
Rev: Same as number 1.
Hist. met. 3; Fournié 3 = Storer 936; Desavis 2 and 3.

IV. MICHEL DE LA VIGNE (1642-1644)

4 *Obv*: Arms of the Dean, with device: CŒLI ET·PACIS AMORE and below point of shield, 1644 The whole within branches of laurel crossed and tied at the bottom.
Rev: Same as number 1.
Desavis 4.

5 *Obv*: Same as preceding.
Rev: Arms of the Faculty: the three storks in the field, but more on a line, and with less grass. *Legend*: VRBI·ET·ORBI·SALVS· in a curve from left to right above. Exergue: ·FACVL·MEDIC·/PARIS·1643
Hist. met. 4; Fournié 4; Storer 2038 (cast); Desavis 5; Brettauer 2574.

Desavis 6 is a cliché of the obverse type. It is assumed that the date has been omitted in the reading of the obverse of her numbers 4 and 5, since she refers to the *Inventaire des poinçons et des coins de la Monnaie des Médailles* (a manuscript preserved in the *Archives nationales*, K K. 950, published by F. Mazerolle in installments in the *Gazette numismatique française*, 1903 ff., and hereinafter referred to as the *Inventaire*), no. 1555, which obverse type is said to bear the date. Number 4 is not an improbable combination and is so included here as genuine.

Unfortunately, Storer 2038 was not examined until after this paper was completed, when it was borrowed, as presumably an original, to be photographed for inclusion in the illustrations. It turned out to be a rather worn cast, and, though Storer describes the specimen in his collection as bearing the date 1644 below the shield, it is not visible on the cast. It is possible, therefore, that a variant type should be added to the series, and that Dr.

Desavis was accurate in her reading, though lax in not calling attention to an unpublished type. The evidence of a worn cast of unstated origin has been deemed too uncertain, however, to warrant renumbering of the present catalogue.

Storer 2037, based undoubtedly, though no reference is cited, on Duisburg CXCIX, after Kluyskens, *Les hommes célèbres dans les sciences et les arts et des médailles qui conservent leur souvenir*, I, 240, with the addition of the *legend*, M·MICHAELI·DE·LA·VIGNE·DECANO, is dropped as highly doubtful. Leys remarks specifically, "Nomen Decani omittitur in hoc Numismate," and no examples are actually known. As Dr. Eduard Rüppell remarked in his "Beitrag zur Kenntniss der numismatischen Erinnerungen an Aerzte und Naturforscher" (*Numismatische Zeitschrift*, VI, 1874/5, p. 154), "viele der besprochenen Stücke besitz Kluyskens nicht selbst, hat sie sogar nie gesehen, und mitunter macht er die lächerlichsten Irrungen."

V. JEAN MERLET (1644-1646)

6 *Obv*: Arms of the Dean. *Legend*: · M·IOANNE · MERLET · DECANO · Exergue: · 1645 ·
Rev: Same as number 5.
Hist met. 5; Desavis 7.

7 *Obv*: Same as preceding.
Rev: Arms of the Faculty, new die. *Legend*: * VRBI * ET * ORBI * SALVS * Exergue: ·FACVL·MEDIC·/PARIS 1646
Fournié 5 — Storer 2429; Brettauer 2575.

8 *Obv*: Same type as the preceding, but with slight differences in details, and in exergue: · 1646 ·
Rev: Same as preceding.
Fournié 6 — Storer 2430.

The *Historia metallica* gives only "unum Numisma" in which "altera pars eadem fere ac in superiore." This piece, which was unknown to Fournié, has come to light in the Gilbert Collection. Number 7, however, is confirmed by the *Inventaire*, and 8 is also certain. Since Storer refers to Fournié for both pieces, it can be presumed that, for 1645 on reverse, one should read 1646. The *Inventaire* also notes that the die is damaged. This is of particular interest, since the die was re-used, muled with a number of later obverse types. For example, see under Jean-Antoine Morand. In its muled form, the second line has been removed from the exergue. Though the sun and clouds show some signs of wear, there can be no doubt as to the identification of the die. It is illustrated in Fournié, Pl. X, 024, but its origin is not noted; see also our fig. 4.

MULES

The obverse of No. 6 has been found struck with the following:

1. 45 *rev.* (Storer 2427 — Army 721; Brettauer 2579)
2. M10 (Fournié 05 — Storer 2423)
3. M11 (Fournié 06 — Storer 2424)

4. M14 *rev.* (Fournié 01 — Storer 2426)
5. M17 (Brettauer 2576)
6. M26 (Brettauer 2577)
7. M27 (Fournié 025 — Storer 2428; Brettauer 2578)
8. M28 (Brettauer 2580)

The reverse of No. 7 is also found struck with M11 (Storer 2425 — Army 1047).

VI. JACQUES PERREAU (1646-1648)

9 *Obv*: Arms of the Dean. *Legend*: from right to left, DV·DOYENNÉ·DE·M^E· IACQVES·PERREAV with a rosette at top to complete the circle.
Rev: Arms of the Faculty, new die. *Legend*: * VRBI * ET * ORBI * SALVS * Exergue: ·FACVL·MEDIC· / PARIS·1648
Hist. met. 6; Fournié 7 — Storer 2801.

VII. JEAN PIÉTRE (1648-1650)

No jetons struck. Storer 2832 should be dropped.

VIII. GUY PATIN (1650-1652)

10 Obv: Head and truncated neck in profile to right, without wig. *Legend*: from left to right, M. GVY PATIN. DOYEN. 1652. Exergue: FELIX QVI / POTVIT. [*see fig. 1.*]
Rev: Arms of the Faculty. Same type as No. 7, but different die.
Fournié 8 — Storer 2772.
11 *Obv*: Same as preceding.
Rev: Arms of the Faculty. Same die as No. 10, but date altered to 1648. [*See fig. 2.*]
Hist. met. 7; Fournié 9 — Storer 2773; Desavis 8 and 9; Jacobs; Army 1599 — Storer 2771 (? see below).
12 *Obv*: Same as preceding, but for DOYEN read DOIEN.
Rev: Same as preceding.
Fournié 10 — Storer 2770; Brettauer 2581.
13 *Obv*: Same as No. 10.
Rev: Arms of the Faculty, new die. *Legend*: * VRBI * ET * ORBI * SALVS * Exergue: ·FACVL·MEDIC· / PARIS·1652 [*see fig. 2.*]
Storer 2774; Brettauer 2583; Desavis 10.
14 *Obv*: Same as No. 12.
Rev: Same as preceding.
Fournié 11; Storer 2775; Desavis 11; Brettauer 2582.

Though a critical examination of all the known Merlet jetons struck with the 1646 reverse would be necessary for satisfactory proof, it is quite probable that the 1646 die struck with Patin No. 10 was made to replace the broken die (cf. *supra*) which in turn was preserved to appear again in mules with

part of the exergue inscription effaced, and this second die would have been used for the latest Merlet jetons. The second 1646 die was then remade into 1648 by changing the 6 to 8. Army 1599 (Storer 2771) has been examined. The piece is very badly worn. The *Y*, however, is clearly discernible, and there was most probably a date. The date on the Jacobs specimen is scarcely readable. The evidence certainly does not warrant the identification of a variant type, as Storer.

IX. PAUL COURTOIS (1652-1654)

15 *Obv*: Arms of the Dean. *Legend*: from right to left, M·PAVLO·COVRTOIS·DECANO·1654. with a rosette at top to complete the circle.
Rev: Arms of the Faculty. Same as No. 13.
Hist. met. 8; Fournié 12 — Storer 702; Desavis 12.

X. JEAN DE BOURGES (1654-1656)

16 *Obv*: Arms of the Dean. *Legend*: from right to left, M· IOANNE·DE·BOVRGES·DECANO·1656 with a rosette at top.
Rev: Like preceding, same as No. 13.
Hist. met. 9; Fournié 13; Storer 445; Desavis, 13-15; Brettauer 2584.

As has already been remarked the re-use of these reverse dies cannot be correctly described as "muling" (as Storer); it is rather an instance of economy. This particular 1652 die lasted for five decanats.

XI. ROLAND MERLET (1656-1658)

17 *Obv*: Arms of the Dean [same as on jetons of Jean Merlet, Nos. 6-8, but different treatment in details]. *Legend*: ·M·ROLANDO·MERLET·DECANO· Exergue: · 1658 ·
Rev: Arms of the Faculty, same as number 13.
Hist. met. 10; Fournié 14 — Storer 2432; Desavis 16.

Storer 2431 (17 obv./18 rev.) is a mule, if it exists anywhere outside of the pages of the *Magasin Pittoresque*, which is extremely doubtful.

XII. FRANÇOIS BLONDEL (1658-1660)

18 *Obv*: Arms of the Dean, with device on ribbon, CRESCIT IN ADVERSIS VIRTVS *Legend*: from right to left, M.FRANCISCO·BLONDEL·DECANO·1660
Rev: Arms of the Faculty, new die. *Legend*: ·VRBI·ET·ORBI Exergue: ·FACVL·MEDIC· / ·PARIS·1660· [*see fig. 2.*]
Hist. met. 11; Fournié 15; Storer 394 (cast); Desavis 17-18; Brettauer 2585.

Fournié's description of this piece does not agree with his illustration. This reverse die is not the same as the preceding, but is a completely new treatment, and marks the first instance of the legend without the word

SALVS. Storer 395 (= Feuardent 4503), said to have the date 1658 on the obverse, is not included. We presume the Feuardent reading to be an error, since Fournié cites the same piece for his No. 15 = our No. 18.

XIII. PHILIBERT MORISSET (1660-1662)

19 *Obv*: Aesculapius [? Leys says Mercury; others identify the figure as the personification of Morisset himself], wearing classic mantle and boots and holding in his right hand a staff with entwined serpent, standing facing, on rather rough ground, his right foot resting on a pile of rocks ("monticulum"). *Legend*: IN·ARDVIS ·PRVDENTIA· Exergue: M·P·MORISSET·DE· / · 1662 · [*See fig. 4.*]

Rev: Arms of the Faculty, same as number 13.

Hist. met. 12; Fournié 16 = Storer 2537; Brettauer 2586.

The jeton, 19 obv. / 18 rev. (Fournié 17; Feuardent 4508; Storer 2538; Army 2147), since it has, to date at least, been found only as a restrike, is here assumed to be a hybrid, and removed from the list of genuine pieces. The Storer specimen, which has been examined by the author, bears the "anchor and C" mark and the word CUIVRE on the edge. The reverse die incidentally has a bad break, which makes the middle stork seem to be carrying a ribbon in its beak as well as the spray. Storer is also mistaken in his reading of dates, throughout the entire Morisset series. The obverse die always bears the date 1662, and not 1660; in the case of the reverse 2538, for 1666, read 1660.

MULES

1. The combination 10 obv. / a reverse, described as "QVO LVMINA VIBRAT. Trois navires allait à droite sous le soleil dans un écu orné," by Feuardent (4509 = Fournié, p. 164, Pl. X, 021 = Storer 2534) requires special comment. Dr. Leys includes this piece in the decanal series, *Hist. met.* 13, identifying the arms as those of the Dean. On the basis of analogous descriptions, which unfortunately is the only available evidence, there can be no doubt that this reverse type is the one commonly employed on jetons of the Merciers, bearing a medallic representation of the arms of that corporation (cf. Coll. Rouyer, 3501; Feuardent 4844 ff., and especially 4856). We are forced to conclude that the author of the *Historia metallica* erred in describing the arms as those of the Dean, but it is not impossible that this "mule" was an authentic jeton. The *Inventaire* says, under No. 1908, that the Morisset obverse was to be struck with a reverse bearing the arms of the Faculty, dated 1662. This die is unknown, and it is reasonably safe to assume that it either was never made or that it was damaged in the process. At any rate, the old faithful standby of 1652 was substituted. The 1660 die had also acquired a bad break as we have noted, and would have been unusable. Is it too implausible to suppose that the hard pressed 1652 die finally wore out (this is its last appearance and it is not preserved at the mint), and that, casting about in desperation for another die to complete the order, the authorities, with or without the consent of the Dean, had the bright idea of using the available arms of the Merciers as the arms of Morisset?

It is certain, anyway, that this hybrid, of which apparently only one example is known (and where this piece may be now, the author does not know) is a contemporary and not a later or nineteenth century commercial production. With a regrettable lack of courage, this jeton is classed as a mule, which it indisputably is. Its right to a place in the authentic decanal series can only be determined, if at all, by a re-examination of the known piece, or of others which may come to light.

19 *obv.* is also found muled with the following:

2. 43 *rev.* (Fournié 42 — Storer 2531)
3. 57 *rev.* (Fournié 55 — Storer 2539)
4. M1 (Fournié, p. 164 — Storer 2532; Brettauer 2590)
5. M3 (Fournié 012; Storer 2533; Brettauer 2591)
6. M4 (Fournié 011 — Storer 2540)
7. M13 (Fournié 09 — Storer 2536)
8. M14 *obv.* (Brettauer 2587)
9. M15 (Brettauer 2589)
10. M18 (Fournié, p. 163 — Storer 2530; Brettauer 2588)
11. M19 (Fournié, p. 163 — Storer 2536)

Storer 2529 is omitted. It seems to be a mule with a reverse die of a jeton of the "Batiments du roi," suspiciously similar to M19.

XIV. ANTOINE MORAND (1662-1664)

20 *Obv*: Arms of the Dean. *Legend*: from right to left, M·ANTONIVS MORAND DECANVS 1664 and a cross at top to complete the circle.
Rev: Arms of the Faculty: the storks in the field, and on a line. *Legend*: VRBI·ET·ORBI Exergue: FACVL MEDIC / PARIS 1664
Hist. met. 14; Fournié 18; Storer 2497 (Cast); Desavis 20-21; Brettauer 2592.

21 *Obv*: Bust in profile to left, wearing peruke and cape with ermine trim. *Legend*: from left to right, M·ANTONIVS·MORAND·DECANVS and a rosette. [*See. fig. 1.*]
Rev: Same as the preceding, though a different die.
Hist. met. 15; Fournié 19; Storer 2495; Desavis 22-23; Brettauer 2593; Army 717.

Storer 2498, with a variant reverse die, on the basis of Kluyskens, is dropped as doubtful.

Fournié 20 and 21, Storer 2493 and 2494 respectively, the first a combination of the portrait obverse with the 1660 reverse die, the other with an otherwise unknown die which is said to bear the date 1663, combined according to Fournié with the portrait, according to Feuardent (4512) with the arms, are concluded to be hybrid restrikes, and have consequently been dropped from the list of authentic jetons. Storer 2493 is struck direct; the reverse being the same broken die as in his Morisset 2538 discussed above.

MULES

The portrait obverse 21 is found muled with:

1. 43 *rev.* (Fournié 42)
2. 45 *rev.* (Storer 2484 [see below]; Brettauer 2596; Army 1637)
3. 57 *rev.* (Fournié 55 — Storer 2499)
4. M2 (Fournié 07 — Storer 2485)
5. M3 (Fournié 012 — Storer 2489; Army 1035)
6. M4 (Fournié 011 — Storer 2500)
7. M7 (Fournié 013 — Storer 2491; Army 1034, 1665)
8. M9 (Fournié 022 — Storer 2492)
9. M13 (Fournié 09 — Storer 2490)
10. M14 *obv.* (Storer 2482 [but not Army]; Brettauer 2594)
11. M14 *rev.* (Fournié 02 — Storer 2483; Army 1036)
12. M15 (Fournié 08 — Storer 2481; Army 681)
13. M16 (Fournié 010; Storer 2486; Brettauer 2595)
14. M27 (Storer 2488; Army 679)
15. M28 (Storer 2487; Brettauer 2597; Army 680)

The reverse of 21 is also found muled with M16 (Storer 2496 — Army 719).

In connection with No. 2, it should be remarked that an examination of the specimen in the Storer collection disclosed the reverse type to be as No. 45 and not No. 43 (Fournié 42), as stated in the description of Storer 2484.

XV. FRANÇOIS LE VIGNON (1664-1666)

22 *Obv*: Bust in profile to right, wearing peruke and fur cape. *Legend*: ·M$^{RE}_{\cdot}$ FR·LE·VIGNON·CON$^{R}_{\cdot}$ DES$^{T}_{\cdot}$ ET·DOIEN·

Rev: Arms of the Faculty: the storks in the field, and on a line. *Legend*: ·VRBI·ET·ORBI· Exergue: ·FACVL·MEDIC· / ·PARIS·1666·

Hist. met. 16; Fournié 23 — Storer 2141; Desavis 24.

23 *Obv*: Same as preceding.

Rev: Within a beaded circle, broken by exergue line, a nude right arm extending from clouds, the bodies of three writhing snakes squeezed tightly in the hand. *Legend*: ·CONTERO MONSTRA· Exergue: · 1666 ·

Hist. met. 17; Fournié 22 — Storer 2139; Desavis 25; Brettauer 2598.

Storer lists a mule (2140) of the obverse with the reverse of a jeton of Theophraste Renaudot (cf. Storer 2996, Rouyer Coll. 2906). It has been impossible to check the reference cited, however. It might not be out of place to point out here that it is incorrect and decidedly confusing to state as Storer does that his number 2995 (Renaudot *obverse* / "Plus penser . . .") is a "mule of jeton of Baron, Sen." For the source of this very popular die, see our M28. It is probably to be found in more hybrid combinations than any other die.

XVI. JEAN ARMAND DE MAUVILLAIN (1666-1668)

24 *Obv*: Nude bust, with peruke, in profile to right, within a circle, broken by top of head and point of truncation. *Legend*: from left to right, IOAN·ARM·DE·MAVVILLAIN·DOYEN. and below, ·1668·DV· FOVR [— Jean-Baptiste Dufour], the signature in minute letters.

Rev: Ulysses blinding Polyphemus. *Legend*: VERO LVMINE CŒCAT

Hist. met. 18; Fournié 24; Storer 2399; Desavis 26-28; Brettauer 2599; Army 1593, 1594.

This obverse was muled with the reverse of the jeton of the Société de Médecine de Lyon (M35), according to Storer 2398. He does not state, however, where he obtained the casts which were, until their accidental destruction, in his collection.

XVII. JEAN GARBE (1668-1670)

25 *Obv*: Arms of the Dean. *Legend*: from right to left, IOANNES·GARBE· DECANUS·1670

Rev: Arms of the Faculty, new die; storks stockier than usual. *Legend*: ·VRBI· ·ET·ORBI· Exergue: FACVL·MEDIC· / ·PARIS· 1670

Hist. met. 19; Fournié 25 — Storer 1183; Desavis 29.

Storer 1182 is dropped as most certainly non-existent. It is described as: "*obv*: M.IOAN.GARBE DECANO. Family arms. Ex. 1670. *Rev.* LVMINIS·ÆMVLVS·ARDOR· Sun and signs of zodiac. Ex. FACVL· MEDIC·PARIS (as jeton of Puylon)." But see the Puylon jeton, below. In his description of the latter, Storer adds to the confusion by noting that it is "Somewhat like the jeton of Garbe." Certainly there is no exergue or space for one on the Puylon reverse. Storer 1182 is a quite accurate rendition of his source, Duisburg CCXII. But the latter has, in turn, based his description on Kluyskens. Since Denis Puylon, himself, is not listed in this early catalogue, we are inclined to believe that Kluyskens got his notes mixed, and produced a composite Garbe-Puylon.

XVIII. DENIS PUYLON (1670-1672)

26 *Obv*: Arms of the Dean. *Legend*: M·DION·PVYLON·MEDIC·PAR· DECANO· Exergue: · 1672 ·

Rev: Sun shining down on mountainous landscape from a band bearing some of the signs of the zodiac; the whole within a circle. *Legend*: from right to left, · LVMINIS · ÆMVLVS · ARDOR · with a rosette at top.

Hist. met. 20; Fournié 26 — Storer 2896.

XIX. JEAN-BAPTISTE MOREAU (1672-1674)

27 *Obv*: Bust in profile to right, in usual costume. *Legend*: M·IO·BAPT MOREAV·M·ET·PR·R·DECANO Below, in minute characters, ·C·H·1674·

Rev: Arms of the Faculty: storks and legend arranged as in No. 25, Exergue: ·FACVL·MEDIC· / ·PARISIENS·

Hist. met. 21; Fournié 27 — Storer 2518; Desavis 30-31.

We have examined the cast upon which Storer 2517 is based, in which the second line of the exergue is read as PARIS 1674. Though admittedly not very distinct on the cast, the second line is most certainly PARISIENS, as in the type which we describe.

No one seems ever to have produced even a guess as to the identity of the engraver of this jeton. The initials have generally been read as G. H. (or possibly, G. R., cf. Fournié, p. 49). Dr. Leys, however, reads C. H., and we would like to suggest that the medallist was Claude Hardy, who, according to Forrer (*Biographical Dictionary of Medallists*, II, p. 427), "was employed at the Paris Mint from 1674 to 1676, cut dies for the coinage of Four Sol pieces issued at Lyons in 1674, and was appointed by Royal letters of 28th November 1686, Die-cutter and Engraver at the Mint of Lille," and probably later (1698-1702) coin-engraver at the Mint of Nancy.

XX. ANTOINE-JEAN MORAND (1674-1676)

28 *Obv*: Bust in profile to right, wearing peruke with rather straight hair, and the usual cape. *Legend*: ·ANTO·IOANNES·MORAND· DECANVS· [the S small and crowded in]. Below, 1676 [*See fig. 1.*]

Rev: Arms of the Faculty, new die. *Legend*: ·VRBI· ET·ORBI· Exergue: FACVL·MEDIC·/PARIS·1676· [*See fig. 2.*]

Hist. met. 22; Fournié 28; Storer 2512 (restrike); Desavis 32-34; Brettauer 2600.

MULES

The obverse die is muled with the following:

1. *7 rev.* with second line of exergue effaced (Fournié 024 [textual description is wrong] — Storer 2514; Feuardent 4517a)
2. 45 *rev.* (Fournié 020 — Storer 2506; Brettauer 2602; Army 1037)
3. *57 rev.* (Storer 2515)
4. M5 (Fournié 014 — Storer 2501)
5. M8 (Fournié 015 — Storer 2507; Army 1038)
6. M9 (Storer 2511; Brettauer 2604; Army 682)
7. M14 *obv.* (Fournié 023 — Storer 2503)
8. M14 *rev.* (Storer 2504)
9. M27 (Storer 2510; Brettauer 2601; Desavis 35)
10. M28 (Fournié 045 — Storer 2509 [but for SENTIR read PENSER]; Brettauer 2603)
11. "With obverse of a royal jeton for the second raising of the siege of Charleroi," according to Storer, after Kluyskens. Cf. Storer 2508.

Storer 2513 (*28 obv. / 29 rev.*), on basis of the *Magasin Pittoresque*, is dropped as unsubstantiated. Storer 2505 and 2502, respectively similar to numbers 2 and 7 in the above list, but with the dates in the exergues, rather than effaced as is customary, may or may not be accurately described. If correct, they are only variants.

XXI. ANTOINE LEMOINE (1676-1678)

29 *Obv*: Bust in profile to right, wearing extremely curly peruke. *Legend*: ANTONIVS·LE MOINE·DECANVS Below, A·F·

Rev: Arms of the Faculty, new die: the three storks on a line to left, in the field; bills tipped down. *Legend*: ·VRBI· ET·ORBI· Exergue: FACVL·MEDIC·/PARIS·1678 [bad die break between *O* and *R* running from rim into field, on piece illustrated by Fournié.

Hist. met. 23; Fournié 29; Storer 2093; Brettauer 2605; Army 2149.

30 *Obv*: Same as preceding.

Rev: Arms of the Faculty, new die: much slenderer and taller storks with bills held almost horizontally. *Legend*: ·VRBI· ET·ORBI Exergue: ·FACVL·MEDIC·/·PARISI·/·1678·

Fournié 30 — Storer 2094.

Storer fails to note that in the first reverse die the exergual inscription is in two lines, not three; and Fournié does not remark the change to PARISI in the second die. Storer 2095 (— Feuardent 4521a), said to be similar to the last, but with date omitted on reverse, is a restrike, and has been dropped.

The medallist's initials on this piece have not been identified. Nagler (*Die Monogrammisten*, I, No. 550) suggests for the "Stempelschneider N. N.," after Möhsen, two possibilities, either Ferme or DuFour. There is no doubt as to the reading of the first letter, however, and consequently Jean-Baptiste DuFour, who customarily signed either DUFOUR (see No. 24) or D. F. (see M5) can be eliminated. Of Ferme, who was according to Forrer (II, p. 87) a French "Die-sinker and Medallist of the last quarter of the seventeenth century," little is known, and the little does not include his first name. He is known, however, to have engraved medals for Louis XIV from 1677 to 1680.

MULES

The obverse die is found muled with the following:

1. 7 *rev.* with second line of exergue effaced (Storer 2091 — Army 676)
2. 45 *rev.* (Fournié 020 — Storer 2084; Desavis 37; Brettauer 2609; Army 677)
3. 57 *rev.* (Fournié 55 — Storer 2092)
4. M6 (Fournié 016 — Storer 2089; Brettauer 2607; Army 678)
5. M8 (Fournié 015 — Storer 2085)
6. M9 (Fournié 022 — Storer 2090; Brettauer 2610)
7. M12 (Fournié 017 — Storer 2086; Brettauer 2608)
8. M14 *obv.* (Fournié 023 — Storer 2082; Brettauer 2606; Desavis 36)
9. M14 *rev.* (Storer 2083 — Army 1028; Brettauer 2611)
10. M27 (Storer 2088 — Army 1027)
11. M28 (Fournié 046 — Storer 2087; Army 1026)

XXII. CLAUDE QUARTIER (1678-1780)

31 *Obv*: Bust in profile to right, wearing the usual wig and cape. *Legend*: M·CLAVDIO·QVARTIER·DECANO 1680

Rev: Arms of the Faculty, new die: storks on a line, bills slanting down. *Legend*: VRBI· ·ET·ORBI· Exergue: FACVL·MEDIC / PARIS [*See fig. 2.*]

Hist. met. 24; Fournié 31; Storer 2899; Desavis 38-40.

XXIII. NICOLAS LIÉNARD (1680-1682)

32 *Obv*: Arms of the Dean. *Legend*: ·M·NIC·LIENARD·DECANO· Exergue: · 1682 ·

Rev: Same as the preceding.

Hist. met. 25; Fournié 32; Storer 2156 (cast); Desavis 41; Brettauer 2612.

XXIV. BERTIN DIEUXYVOIE (1682-1684)

33 *Obv*: Bust in profile to right, wearing furred cape and wig with nearly straight hair. *Legend*: M·BERTINO·DIEVXIVOYE·DECANO Below truncation, at left, 1684 in minute numerals, and above date, by angle of truncation, R [Joseph Roettiers].

Rev: Same as number 31.

Hist. met. 26; Fournié 33 — Storer 845; Brettauer 2613.

34 *Obv*: Same as preceding.

Rev: An eagle flying up to left, its head turned toward the sun, at upper right; a little bird in its beak, another below claw, at lower right. The whole within a circle, broken by exergue line. *Legend*: DIVITIIS · ANIMOSA · SVIS · Exergue: FACVL·MEDIC·PARIS / + EXAMEN·

Hist. met. 27; Fournié 34 — Storer 844; Desavis 42-43; Brettauer 2614.

Storer 846, with the reading of DECA on the obverse, is based on a cast, the origin of which is not given. The none too good impression is from a worn piece, but that there was more than DECA and presumably DECANO is quite clear. It can safely be assumed to be a duplication of Storer 845.

XXV. CLAUDE PUYLON (1684-1686)

35 *Obv*: Bust in profile to right, with wig and cape. *Legend*: M CLADIVS PUYLON·DECANVS

Rev: Allegory symbolizing the powerful effects of Eloquence: Hercules, wearing lion-skin and holding his club, standing at left, addressing a group at right; little chains connect his lips and their ears. *Legend*: LINGVA · DEXTRAQVE · POTENS · Exergue: · 1686 ·

Hist. met. 28; Fournié 35 — Storer 2895; Desavis 44-45.

XXVI. PIERRE PERREAU (1686-1688)

36 *Obv*: Arms of the Dean [same as Jacques Perreau, cf. No. 9]. *Legend*: M·PETRO·PERREAV·DECANO· Exergue: 1688·

Rev: Arms of the Faculty. *Legend*: ·VRBI · ET · ORBI ·

Hist. met. 29; Desavis 46.

XXVII. PIERRE LÉGIER (1688-1690)

37 *Obv*: Arms of the Dean. *Legend*: from right to left, M·PETR·LEGIER·MED·LECT·ET·PROFESS·REG·DECANO and a star at top completing circle.

Rev: Arms of the Faculty: storks quite similar to No. 31, but variations in treatment of sun and clouds. *Legend*: VRBI·ET·ORBI Exergue: FACVL·MEDIC· / PARIS / 1690

Hist. met. 30; Fournié 36 — Storer 2073; Brettauer 2615.

XVIII. HENRY MAHIEU (1690-1692)

38 *Obv*: Arms of the Dean. *Legend*: from left to right, M·HENRICO·MAHIEV·DECANO·1692·

Rev: Arms of the Faculty, same as number 27.

Hist. met. 31; Fournié 37 — Storer 2288; Desavis 47.

XXIX. CLAUDE BERGER (1692-1696)

39 *Obv*: Arms of the Dean. *Legend*: from left to right, M·CLAVDIO·BERGER·DECANO·1694·

Rev: Arms of the Faculty, same as number 31 [not 27, as Fournié, but as Leys recognized: "Pars altera eadem est ac calculi *Cl. Quartier.*"].

Hist. met. 32; Fournié 38; Storer 291; Desavis 48.

40 *Obv*: Bust of Guy-Grescent Fagon in profile to left, wearing curly peruke and robe. *Legend*: GVIDO·CR·FAGON·REGI·A·S·C·ARCHIAT·COMES·

Rev: A swarm of bees [*viginti duae Apes*, in fact, as Leys notes] flying away from the hive, at right. Upper half of field framed by semicircle. *Legend*: SIC NOS SERVAVIT APOLLO· Exergue: M·CL·BERGER· / ITERVM DECANO / ·1696·

Hist. met. 33; Fournié 39; Storer 997 (cast); Desavis 49.

Guy Fagon was not a Dean, and it is not correct to list any of his personal jetons in the decanal series (as Desavis 50 and 51). The jetons described above, however, should be catalogued under Berger, and not Fagon (as Storer). Fagon had served as champion of the Faculty at court, and this service was honored by the jeton—"une haute valeur, car Fagon est le seul non doyen qui figure en portrait sur les jetons de la série décanale" (Fournié).

XXX. JEAN BOUDIN (1696-1700)

41 *Obv*: Bust in profile to right, in the usual costume. *Legend*: M·IOAN·BOUDIN·FACULT·MEDIC·PARIS·DECANUS· Below truncation of arm, ANNIS / ·1696·ET·1698·

Rev: The centaur Chiron leading a youth, possibly the young Aesculapius, by the hand, toward a furnace and chemical apparatus to which he is pointing. About furnace, plants. *Legend*: SERVAT ET DOCET and a rosette. Below a curved exergue line, in two slightly curved lines, FACULT·MEDIC·PARIS· / ANNO·1700·

Hist. met. 34; Fournié 40; Storer 435; Desavis 52; Brettauer 2616.

XXXI. DOMINIQUE DE FARCY (1700-1702)

No jetons struck.

XXXII. FRANÇOIS VERNAGE (1702-1704)

42 *Obv*: Bust of Fagon to left. *Legend*: SCHOLÆ · TUTELA · PRÆSENS·
Rev: Arms of the Faculty, the storks two and one, in an elaborate oval escutcheon. *Legend*: in a semi-circle above, M·FR·VERNAGE· PARIS·FAC·MED·PARIS·DECANO and below, in two concentric lines, PRÆSED·ORD·M·GUID·CRESC· / FAGON·ARCHIAT· COM·ULT·MAI·1703
Hist. met. 35; Fournié 41; Storer 3615; Desavis 53-54; Brettauer 2617; Army 2145.

Another personal tribute to Fagon for further services rendered to the Faculty and to Dr. Vernage himself, both before and after his election as Dean.

XXXIII. ANTOINE DE SAINT-YON (1704-1706)

No jetons struck. Drop Storer 3171.

XXXIV. LOUIS POIRIER (1706-1708)

No jetons struck. Drop Storer 2845.

XXXV. FRANÇOIS AFFORTY (1708-1710)

No jetons struck. Drop Storer 22.

XXXVI. PHILIPPE DOUTE (1710-1712)

No jetons struck. Drop Storer 876.

XXXVII. PHILIPPE HECQUET (1712-1714)

43 *Obv*: Bust in profile to left, in usual costume. *Legend*: PH·HECQUET· ABBAV·M·P·DE· Below truncation, ·N·R· [Norbert Roettiers].
Rev: In the background, on a mountain top, a temple simulating that at Epidaurus; in the foreground, a snake, between mountains and various plants, crawls toward the entrance of the sanctuary. *Legend*: above, MONSTRAT ITER·
Hist. met. 36; Fournié 43 = Storer 1494.

44 *Obv*: Arms of the Faculty, the storks two and one, in an ornate escutcheon, the same type as No. 42, but a different die. *Legend*: at upper left and right, URBI· ET ORBI· and below, in two concentric lines, M·PH·HECQUET ABBAV· / FACUL·MED·PARIS DEC·1713·
Rev: Same as preceding.
Hist. met. 37; Fournié 42; Storer 1495; Desavis 55-56; Brettauer 2619; Army 969.

45 *Obv*: Same as No. 43.

Rev: Same scene as No. 43, but different arrangement. The temple, which seems in this instance to be circular like the Tholos at Epidaurus, is at upper right, with snake rearing up from left foreground. *Legend*: ·MONSTRAT ITER· is placed more to the left. Exergue: 1714 [*See fig. 4.*]

Hist. met. 38; Fournié 44; Storer 1497; Desavis 57-58; Brettauer 2620; Army 1636.

Storer 1496 is dropped from the decanal series. It is said to be a variant of No. 44, with the date 1714 on the obverse. The original, Feuardent 4534a, is a restrike, however, and the reading is quite unsubstantiated. Brettauer 2621 (44 *obv.* / 45 *rev.*) is said to be a restrike, and is also undoubtedly not genuine.

MULES

It might be pointed out in connection with these apocryphal pieces, that both of the "Monstrat iter" dies, though most often the first, were very popular and are to be found in many combinations.

The portrait obverse (43) is found muled with:

1. M14 *obv.* (Fournié 023 — Storer 1492; Army 720)
2. M14 *rev.* (Fournié 03 — Storer 1493)

The obverse with Faculty arms (44) is found with:

3. M9 (Brettauer 2624)
4. M14 *obv.* (Brettauer 2622; Feuardent 4534b)
5. M28 (Brettauer 2623)

XXXVIII. JEAN-BAPTISTE DOYE (1714-1716)

46 *Obv*: Bust in profile to right, in usual costume. *Legend*: M.I.B.DOYE FAC.MED.PARIS.DECANUS. Below truncation, N.R· [Norbert Roettiers]. [*See fig. 1.*]

Rev: Jupiter standing on clouds at upper left, his eagle perched behind him. With his left hand, he holds a shield bearing the arms of the Faculty; with his right, he hurls a thunderbolt down upon five figures (Titans), some of whom have been hit, while the others struggle to escape. *Legend*: CLARUS GIGANTEO TRIUMPHO. in unusually small lettering. Exergue: AN. 1715. et. / 1716.

Hist. met. 39; Fournié 47; Storer 878; Desavis 61-62; Brettauer 2626; Jacobs (two specimens); Army 1591.

This jeton is approximately 2 mm. larger than the usual size—*ca.* 31 to 32 mm. Dr. Leys notes that it is "majoris moduli" in contrast to the usual "vulgaris moduli." The following piece is "etiam majoris moduli."

47 *Obv*: Elaborate monogram of Dean's initials. *Legend*: M. IOAN. BAPT. DOYE. DECANVS· Exergue: ANNIS / 1715 ET 1716

Rev: Same as preceding.

Hist. met. 40.

The following pieces are again in the customary size, *ca.* 29 mm.

48 *Obv*: Nude bust of Dean in profile to right, wearing extremely curly peruke.

Legend: M.I.B.DOYE.FAC.MED.PARIS.DECANUS. Below, D.V. [Jean DuVivier].

Rev: The scene of Jupiter and the Titans, but in a different arrangement. Jupiter is seated on clouds at right, leaning on his shield, behind which is his eagle. The Titans are also differently grouped. *Legend*: CLARUS GIGANTEO TRIUMPHO Exergue: AN·1715·ET 1716· On stone at right, D.V.

Hist. met. 41; Fournié 48; Storer 880; Desavis 63; Brettauer 2627; Army 1017.

49 *Obv*: Monogram, as No. 47, but on a smaller flan, and with a third line added in exergue: ANNIS / 1715 ET 1716 / MAVELOT The last word in minute characters.

Rev: Same scene as on No. 46, but on smaller flan, and with legend in larger letters. In exergue: MAVELOT crowded in minute characters.

Hist. met. 42; Fournié 46; Storer 879; Desavis 60; Brettauer 2625.

50 *Obv*: Same as preceding.

Rev: Oval shield with arms of the Faculty, in an elaborate cartouche. On a band, above, VRBI ET ORBI *Legend*: FACVLTAS MEDICA PARISIENSIS

Hist. met. 43; Fournié 45 — Storer 877; Desavis 59.

No. 47, though apparently not as yet known, is included here as genuine, since it is exceedingly plausible. The crowding of the third line in the exergue on the similar but slightly smaller obverse of No. 49, on which the reverse is also a copy, tends to point to the existence of this larger prototype. Storer was confused in his descriptions of 877 and 879. On the basis of his references to Fournié, the obverse of these two pieces should be the monogram and not the bust.

MULES

1. 46 *obv.* / 56 *rev.* ((Fournié 54 — Storer 883)
2. 48 *obv.* / M21 (Fournié 026 — Storer 882; Army 1018)

We have followed Storer on the obverse type employed in the mule with the reverse of the Emmerez jeton, of which the example is, according to Fournié, in the Musée Carnavalet. Considering the discrepancy in size, we are inclined to believe that this may be wrong, and that the DuVivier bust is muled in both cases.

XXXIX. ARMAND DOUTÉ (1716-1720)

51 *Obv*: Bust in profile to right, wearing the usual costume. *Legend*: A. DOUTÉ REGI A CONS S.B.D.ARCH· Below, D·V· [Jean DuVivier]. [*See fig. 3.*]

Rev: Arms of the Faculty in an elaborate cartouche, of same general type as preceding, but differing in details. On a band, above, URBI ET ORBI *Legend*: from right to left, A·DOUTÉ REGI A CONS S.B.D.ARCH·

Hist. met. 44; Fournié 49; Brettauer 2628.

52 *Obv*: Same as preceding.
Rev: Crowned arms of the Dean, with lion-supporters. Exergue: F.M.P. DECANUS / AN. 1717·1718.
Hist. met. 45; Fournié 50 [but illustration under this number is of next type] — Storer 868; Desavis 66; Brettauer 2629.

53 *Obv*: Same as number 51.
Rev: Same as preceding, but dates in exergue: 1719-1720
Fournié 51; Storer 869; Brettauer 2631.

54 *Obv*: Elaborate monogram of Dean's initials. Below, in a cartouche, DECANUS / AN. 1717.1718.
Rev: Same as number 51.
Hist. met. 46; Fournié 52; Storer 867 (— Feuardent 4546); Desavis 64-65; Brettauer 2630

55 *Obv*: Same as preceding, but date changed to: 1719·1720. [*See fig. 3.*]
Rev: Same as number 51.
Fournié 53; Storer 865.

Storer's obverse and reverse descriptions of numbers 865 and 867 should be transposed to correspond with other pieces. There are also a number of hybrid combinations of these dies, as Fournié notes, p. 107, all restrikes. Feuardent 4548 — 51 *obv.* / 55 *obv.* — Storer 864, and not 866, which is consequently to be dropped. This hybrid is also found in the Brettauer Collection (2633) and in the Government Collection (2151). The Storer specimen is struck direct and is stamped on the edge. Another hybrid restrike, 64 *obv.* / 62 *rev.*, is Storer 870; and 61 *rev.* / 60 *rev.* is Brettauer 2632, and Feuardent 4553. Storer 875, a variant of No. 51 with the artist's signature on the reverse (the Faculty arms), is based on Duisburg CCXXXIII, 2, after Kluyskens. It is highly unlikely that such a piece exists.

XL. GUY-ERASME EMMEREZ (1720-1722)

56 *Obv*: Nude bust in profile to right. *Legend*: G·ER·EMMEREZ DECANUS·1721 & 22 Below, J C R in monogram [Joseph-Charles Roettiers].
Rev: Justice, a draped female figure, standing facing, with head in profile to right, holding up scales in her right hand, and pointing to the lower pan, on which the numeral 16, with her left hand. On the upper pan, 38. At the right, shield with arms of the Faculty. *Legend*: PONDERE NON NUMERO. Exergue: SERVATA STATUTA in minute letters.
Hist. met. 47; Fournié 54; Storer 970; Desavis 67; Brettauer 2634; Army 2831.

It might be of interest to note that the allegory refers to the results of the voting to elect Armand Douté for a third term. Douté declined to accept the nomination with sixteen opposing votes, and Francis Afforty, who was appointed Dean *pro tempore*, ordered a new election, February 13, 1721, at which Emmerez was chosen. Dr. Leys is guilty of a few mistakes in his catalogue. In this piece, for example, he describes the obverse as "arms of

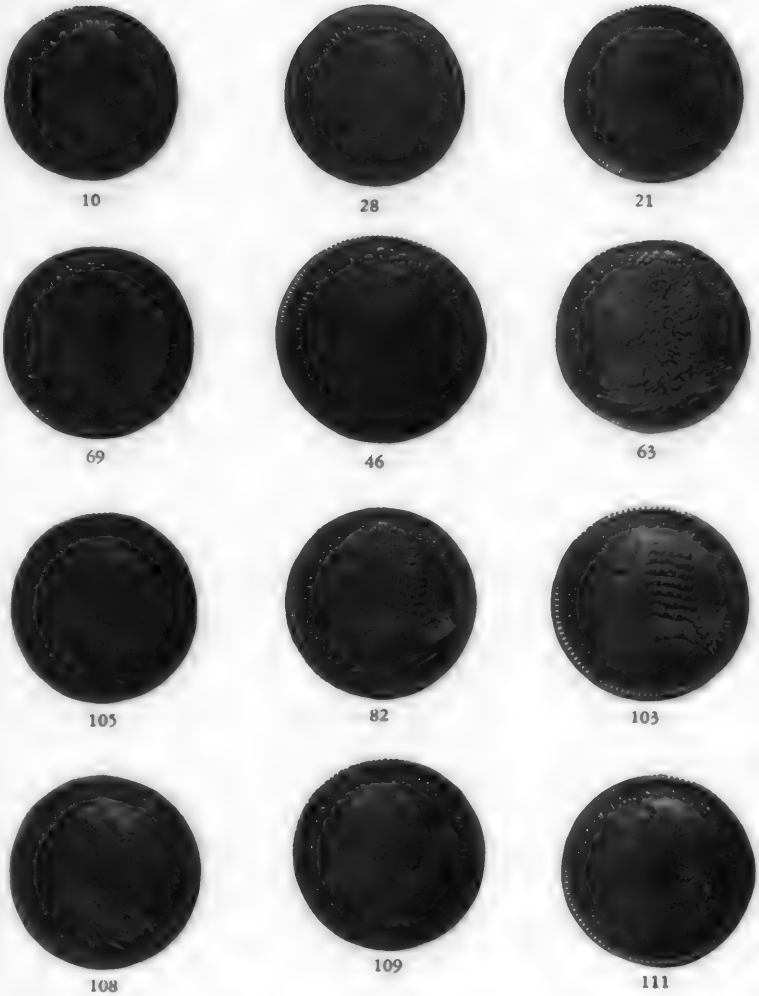

Fig. 1. Obverse Portait Types from Decanal Series: 10, Guy Patin; 28, Antoine-Jean Morand; 21, Antoine Morand; 69, Élie Col de Vilars; 46, Jean-Baptiste Doye; 63, Michel-Louis Reneaume; 105, Le Vacher de la Feutrie; 82, Jean-Baptiste Louis Chomel; 103, Jean-Charles Desessartz; 108, Étienne Pourfour de Petit; 109, Jean-Charles-Henri Sallin; 111, Edmond-Claude Bourru.

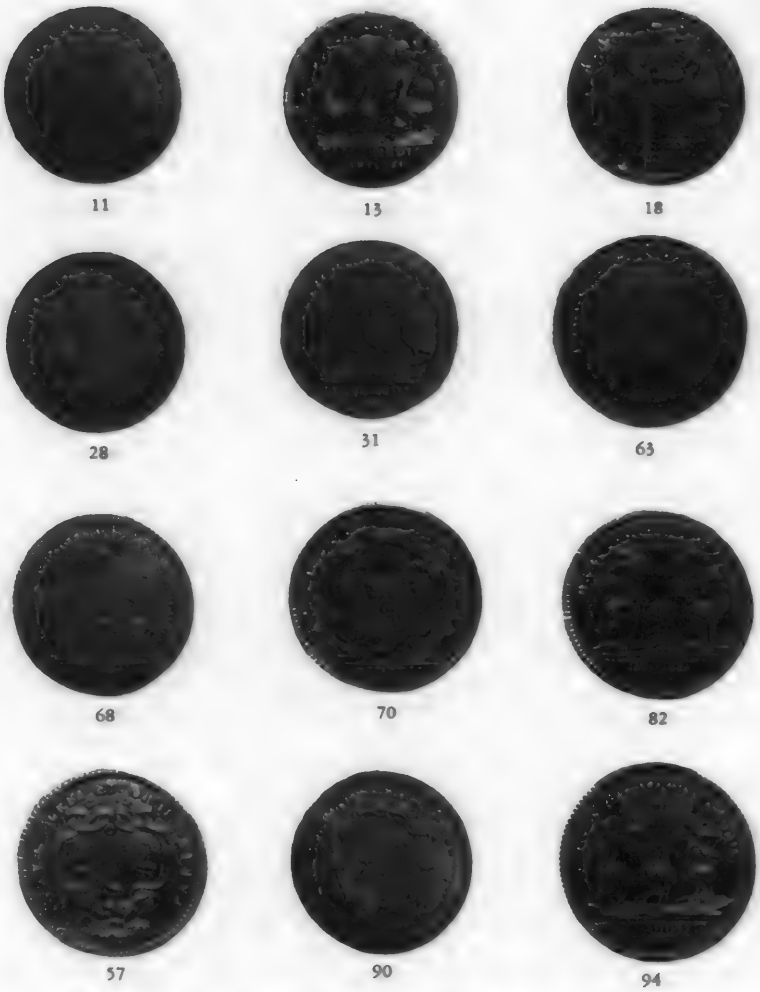

Fig. 2. Reverse Types from the Decanal Series with the Arms of the Faculty. No. 68 is shown in the variant form without date. No. 57, originally struck for Caron, is also found in many hybrid combinations.

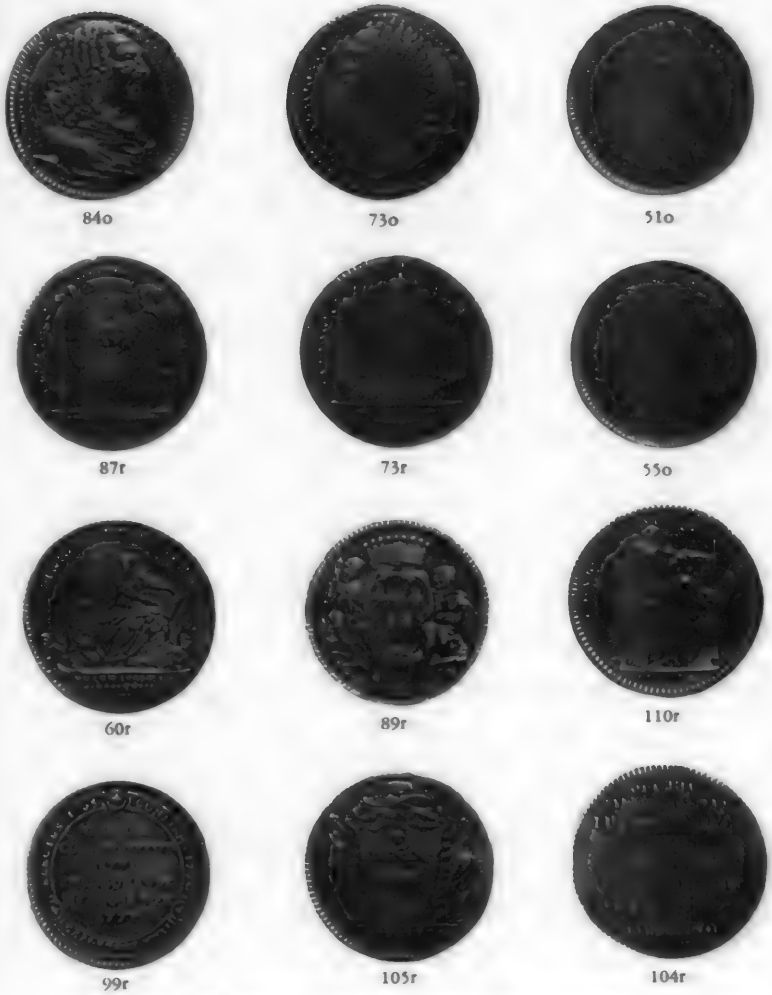

Fig. 3. Miscellaneous Types from the Decanal Series.

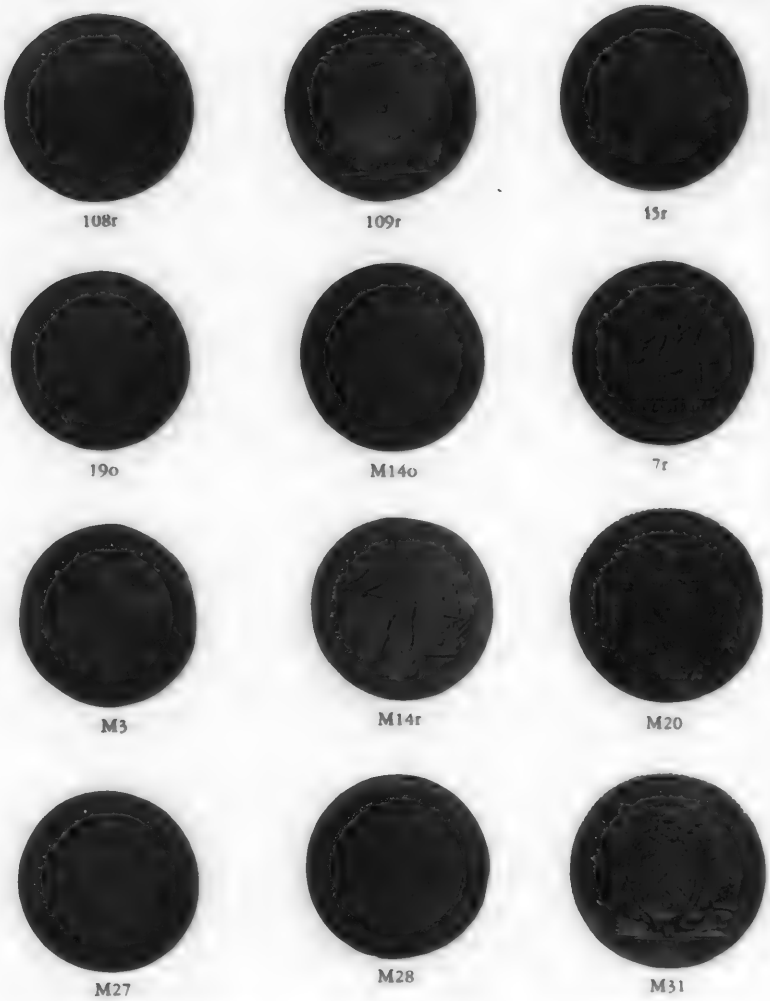

Fig. 4 Miscellaneous Types from the Decanal Series, and Types found in Hybrid Combinations. No. 7 rev. is shown in its variant type with second line of exergual inscription effaced, and 45 rev. without date.

the faculty," but that it was an error is indicated by his description of the signature " infra humeros effigiei."

MULES

The portrait obverse is found combined with:

1. 43 *rev.* (Fournié 42 — Storer 969)
2. 57 *rev.* (Fournié 55 — Storer 972)
3. 60 *rev.* (Storer 967 — Army 684 [but date effaced]; Brettauer 2635)
4. 102 *rev.* (Fournié 101 — Storer 971; Desavis 68; Brettauer 2636)
5. 108 *rev.* (Brettauer 2637)
6. 110 *rev.* (Fournié 109 — Storer 966; Army 1020)
7. M34 (Fournié 018; Storer 968; Army 1019)

XLI. PHILIPPE CARON (1722-1724)

57 *Obv*: Bust in profile to right, in usual costume. *Legend*: PH·CARON DECANUS. 1724 Below, J C R · in monogram [Joseph-Charles Roettiers].

Rev: Arms of the Faculty within a cartouche formed by the bodies of serpents interlaced. *Legend*: above, ·⁝ URBI ET ORBI ⁝· Below, FACUL·MEDIC·PARIS· [*See fig. 2.*]

Hist. met. 48; Fournié 55; Storer 566; Desavis 69-70; Brettauer 2638; Army 964; Jacobs (two pieces).

MULES

The reverse die is itself found muled in many combinations. The obverse is found with the following:

1. 43 *rev.* (Fournié 42 — Storer 565)
2. 68 *rev.* with date effaced (Storer 567 — Army 1013)
3. M9 (Desavis 71)
4. M14 *obv.* (Fournié 023 — Storer 563)
5. M14 *rev.* (Fournié 04 — Storer 564; Brettauer 2639)

XLII. NICOLAS ANDRY (1724-1726)

No jetons struck. Drop Storer 72.

XLIII. ÉTIENNE-FRANÇOIS GEOFFROY (1726-1730)

58 *Obv*: Bust in profile to right, in usual costume. *Legend*: STEPH.FR. GEOFFROY·DECANUS Below truncation, DU VIVIER. [Jean Du Vivier].

Rev: Arms of the Faculty in an elaborate cartouche formed of snakes interlaced with acanthus scrolls. *Legend*: URBI ET ORBI SALUS· Exergue: FACUL. MEDIC. / PARISIENS. / 1728.

Hist. met. 49; Fournié 56; Storer 1212 (cast); Desavis 72; Brettauer 2640; Army 2218.

59 *Obv*: Same bust as preceding, but set lower in the field. *Legend*: STEPH. FR. GEOFFROY ITERUM DECANUS. Below at left, D.V.

Rev: Arms of the Faculty. Same general type as preceding, but differing in details. Same legend. Exergue: FACUL. MEDIC. / PARISIENS. / 1730.

Hist. met. 50; Fournié 57 — Storer 1213; Desavis 73; Brettauer 2641.

MULES

The first obverse type is muled with the following:

1. 45 *rev.* (Fournié 020 — Storer 1208)
2. 56 *rev.* (Fournié 54; Storer 1210; Army 2150)
3. 57 *rev.* (Fournié 55 — Storer 1211)
4. M28 (Fournié 047 — Storer 1209)

XLIV. HYACINTHE-THÉODORE BARON (1730-1734)

60 *Obv*: Bust in profile to right, in usual costume. *Legend*: H·T·BARON F·M·P·DECANUS·1731·32· Below, J. C. R. in script [Joseph-Charles Roettiers].

Rev: Scene commemorating the completion of the *Codex Pharmacopearum*. At the right, Aesculapius seated facing, head slightly to left. He is holding the book, resting on his knees, and points to it for the benefit of the cock and the serpent entwined about his staff, who are looking on at the left. On ground, at lower right, shield with arms of the Faculty, and above it, in the field, J C R in monogram. *Legend*: DIRIGIT UT PROSIT Exergue: PHARMACOPŒA / PARISIENSIS. / 1732. [*See fig. 3.*]

Hist. met. 51; Fournié 58; Storer 165; Desavis 74; Brettauer 2642; Jacobs; Army 1003, 2157.

61 *Obv*: Same bust as preceding. *Legend*: H·T·BARON F·M·P·ITERUM DECANO 1733·34· in smaller letters than preceding.

Rev: Scene commemorating the creation of examinations in anatomy and operative surgery: at the left, four doctors gathered around a table performing an autopsy on a cadaver [examination in anatomy]; leaning against the table, a shield with arms of the Faculty. At the right, a doctor amputating the leg of man, who is supported in a sitting position by an assistant [examination in surgery]. *Legend*: MAJOREM SECTANTUR VESTIGIA Exergue: BACCAL· OPERA ANATOM· / ET CHIRURGICA / EXERCENTES / 1733.

Hist. met. 52; Fournié 59; Storer 166; Desavis 75-76; Brettauer 2643; Army 2156; Jacobs.

62 *Obv*: Same as preceding.

Rev: Same as preceding, but in exergue: BACCALAUREI OPERA / ANATOM·ET CHIRURG. / EXERCENTES / 1733.

Hist. met. 53; Fournié 60; Storer 168; Brettauer 2644.

One seldom finds an absolutely accurate reading of these last two pieces.

There seems no need to point out individual errors. It will suffice to call attention to the fact that on one reverse die, BACCALAUREI is abbreviated and CHIRURGICA is written in full, while on the second the opposite is true. Any other readings are unsubstantiated. Storer 167 and 169 are consequently omitted. Presumably the references cited for 168 and 169 should be transposed; Feuardent 4568-4570 were, however, not "unknown to Fournié," since they are cited by him as examples of the last two types.

MULES

1. 60 *obv.* / 68 *rev.* with date effaced (Storer 174; Army 716)
2. 60 *obv.* / M33 (Storer 172)
3. 61 *obv.* / 43 *rev.* (Fournié 42; Storer 170)
4. 61 *obv.* / M28 (Storer 171 — Army 1004)

XLV. MICHEL-LOUIS RENEAUME DE LA GARANNE (1734-1736)

63 *Obv*: Bust in profile to left in usual costume. *Legend*: M·L·RENEAUME BLÆS ·F·M·P·DECANUS Below, DU VIVIER F· [Jean DuVivier]. [*See fig. 1.*]

Rev: Arms of the Faculty: storks in the field, two and one. *Legend*: URBI ET ORBI SALUS Below, in a semicircular cartouche, in two concentric lines, FACUL.MEDIC.PARIS. / 1734.1735.1736. [*See fig. 2.*]

Hist. met. 54; Fournié 61; Storer 3000; Desavis 77-78; Brettauer 2645; Army 1040, 1064; Jacobs.

MULES

The obverse type is found muled with the following:

1. 43 *rev.* (Fournié 42 — Storer 2998)
2. 48 *rev.* with date effaced (Brettauer 2646)
3. 57 *rev.* (Fournié 55 — Storer 3001)
4. M28 (Fournié 047 — Storer 2999)

XLVI. LOUIS-CLAUDE BOURDELIN (1736-1738)

64 *Obv*: Bust in profile to right, in usual costume. *Legend*: L·C·BOURDELIN PARIS·F·M·P·DECANUS Below, D.V. [Jean DuVivier].

Rev: In the field, SUPREMÆ CURIÆ / DECRETO, / SERVATÆ ET AUCTÆ, / PARISIENS. MEDICORUM / ORDINI, / ANNUÆ PENSIONES. and below an exergue line, 1736.1737. / 1738.

Hist. met. 55; Fournié 62; Storer 443; Desavis 79-81; Brettauer 2647; Jacobs (restrike).

MULES

The obverse portrait type is found with the following:

1. 43 *rev.* (Fournié 42 — Storer 441)

2. 48 *rev.* (Fournié 037 — Storer 440; Brettauer 2649)
3. 57 *rev.* (Fournié 55 — Storer 444; Brettauer 2648; Jacobs)
4. M28 (Fournié 049 — Storer 442; Army 1008)

XLVII. PIERRE-JEAN BAPTISTE CHOMEL (1738-1740)

65 *Obv*: Bust in profile to right, in usual costume. *Legend*: J·B·CHOMEL PARIS·F·M·P·DECANUS Below, DU VIVIER [Jean Duvivier].
Rev: Arms of the Faculty: the three storks on a line in the field, marching to left. *Legend*: URBI ET ORBI SALUS Below, in two concentric lines, within a cartouche, FACUL·MEDIC·PARIS· / 1738·1739· 1740·
Hist. met. 56; Fournié 64; Storer 636; Desavis 82; Brettauer 2651.

66 *Obv*: Same as preceding.
Rev: Arms of the Dean. Below, in a curved line, 1738.1739.1740.
Hist. met. 57; Fournié 63 — Storer 639; Desavis 83; Brettauer 2650; Jacobs.

Storer wrongly lists the first piece under Jean-Baptiste Louis Chomel. A variant of the second, with the reverse differing slightly in details, and struck direct, was issued by a grandson, Jean-Auguste Chomel, in 1824. For this piece, see Fournié, p. 118, and Desavis, No. 84.

MULES

1. 48 *rev.* (Fournié 038 — Storer 637)

XLVIII. URBAIN LÉAULTÉ

67 *Obv*: Same as No. 65.
Rev: In the field: DECAN·1738 / OBIIT 4ª JULII / 1740. / HUIC UNANIMI / VOCE SUFFECTUS / EST DECANUS M. / URBANUS LEAULTÉ / ANTIQUIOR SCHOLÆ / MAGISTER
Hist. met. 58; Fournié 65 — Storer 638.

68 *Obv*: Bust in profile to left, in usual costume. *Legend*: URB·LEAULTÉ P·ANT·SCH·MAG·F·M·D Below, DU VIVIER F· [Jean DuVivier *fecit*].
Rev: Arms of the Faculty: storks marching to left in field. *Legend*: URBI ET ORBI SALUS Exergue: 1740. [*See fig. 2.*]
Hist. met. 59; Fournié 66 — Storer 2062; Desavis 85; Brettauer 2652.

Fournié, after whom Storer, lists Number 67 under Chomel for obvious reasons, but he says: "Ce dernier jeton qui rappelle la date de la mort de Chomel et son remplacement à l'unanimité des voix par l'*antiquior magister* pourrait tout aussi justement et plus justement peut-être, être compté au décanat de l'intérimaire Léaulté." We follow the *Historia metallica* in placing it under Léaulté. We would also call attention to the fact that the reverse die with arms of the Faculty, designed for No. 68, is, with the date effaced, very commonly employed in mules. It is the type so often described as "Arms of the faculty, with exergue vacant."

XLIX. ÉLIE COL DE VILARS (1740-1744)

69 *Obv*: Bust in profile to right, in usual costume. *Legend*: ELIAS COL DE VILARS INCULISME·F·M·P·DECANUS On truncation, DU VIVIER [Jean DuVivier]. [*See fig. 1.*]

Rev: Arms of the Faculty: storks marching to left in the field. *Legend*: URBI ET ORBI SALUS Exergue: 1740. 1741.

Hist. met. 60; Fournié 67 — Storer 664; Brettauer 2653.

70 *Obv*: Same as preceding.

Rev: Arms of the Faculty: storks marching two and one, within a cartouche of the style of Louis XV. *Legend*: URBI ET ORBI SALUS Exergue: 1741·1742· [*See fig. 2.*]

Hist. met. 61; Fournié 68; Storer 665; Desavis 86-87; Brettauer 2654; Army 972; Jacobs.

71 *Obv*: Same as No. 69.

Rev: Façade of the new Amphitheatre. *Legend*: UT PROSIT ET ORNET Exergue: AMPHIT·MEDIC·PARIS· / REÆDIFICATUM / 1744· On building, at lower right, D.V. [Jean DuVivier].

Hist. met. 62; Fournié 69; Storer 666; Desavis 88-89; Brettauer 2655; Army 2143.

72 *Obv*: Same as the reverse of No. 71.

Rev: Same as the reverse of No. 70.

Hist. met. 64; Fournié 70.

Dr. Leys adds another piece, *Hist. met.* 63, a variant or, more probably, a better impression of our number 71. Of it, he says: "Pars anterior et posterior eadem est ac praecedentis. Illud solummodo notatur discrimen quod ibi Amphitheatrum in parte postica calculi nitidius sit expressum & absque maculis, quod in praecedenti non contingit." The *Catalogue manuscrit des coins de la Monnaie de Paris* (for the entries relative to the jetons of the Deans, see Fournié, pp. 10-16), Louis XV number 562, notes that this reverse die is damaged. It seems likely that *Hist. met.* 63 represents a jeton struck from the good die, and 62 from the damaged die. An examination of several specimens would be required to arrive at any conclusion. It might be pointed out, however, that the piece illustrated by Desavis shows much more architectural detail than that pictured by Fournié.

MULES

The portrait obverse is found combined with the following:

1. 48 *rev.* (Storer 660 — Army 1046)
2. 68 *rev.* (Fournié 66; Storer 663; Brettauer 2656; Army 1045)
3. 73 *rev.* (Storer 662; Brettauer 2658)
4. M23 (Fournié 027; Storer 659; Brettauer 2657; Army 2144)

L. GUILLAUME JOSEPH DE L'ÉPINE (1744-1746)

73 *Obv*: Bust in profile to left, in usual costume. *Legend*: G·J·DE L'EPINE PARISIN·SAL·FAC·P·DEC· Below, DU VIVIER F. [Jean DuVivier *fecit*]. [*See fig. 3.*]

Rev: A cross section of the interior of the new anatomical theatre, which was constructed during the decanat of Col de Vilars. *Legend*: PULCHRIOR EXURGIT At lower left, above exergue line, DV Exergue: INAUGURAVIT J·BE·WINSLOW· / XVIII· FEBR·MDCCXLV· / 1744.1745.1746 [*See fig. 3.*]

Hist. met. 65; Fournié 71; Storer 2105; Desavis 90-91; Brettauer 2659; Army 1029; Jacobs.

74 *Obv*: Same as preceding.

Rev: In the field: OLIM DATI / OBSTETRICIB·PROF / RESTIT· 17.MAII 1745 / J.EX.BERTIN 18.MAII / J·B·ASTRUC 14· JUN·EJUSD·A / ——— / BIBLIOTHECA / PUBLICI JURIS FACTA / DIE JOV. 3. MART / MDCCXLVI· with a snake below. In exergue, in a curved line, G·J·DE L'EPINE·DEC·

Hist. met. 66; Fournié 72; Storer 2106; Desavis 92; Brettauer 2660; Army 1506.

75 *Obv*: Reverse of No. 73.

Rev: Reverse of No. 74.

Hist. met. 67; Fournié 73; Desavis 93.

Storer lists a variant of No. 74 (2108), which is said to lack the artist's signature, according to Duisburg. It is otherwise unsubstantiated. There have been a number of incorrect readings of the abbreviated forms in the name of Dr. Jacques Bénigne Winslow, who gave the first lecture in the new building at 3 P. M. on February 18, 1745.

MULES

The obverse type is combined with the following:

1. 43 *rev.* (Fournié 42 — Storer 2104)
2. 57 *rev.* (Fournié 55 — Storer 2107)
3. 68 *rev.* (Brettauer 2661)

LI. JEAN-BAPTISTE THEODORE MARTINENQ (1746-1750)

76 *Obv*: Nude bust in profile to right, on a base. *Legend*: J·B·T·MARTI-NENQ PAR·MED·FAC·DEC· At left, below truncation, D·V· [Jean DuVivier]. Exergue: AN INDE FELICIOR? / 1746·1747· / 1748·

Rev: Arms of the Faculty. The same as that used on the jeton of Caron, No. 57.

Hist. met. 68; Fournié 74 — Storer 2381; Desavis 94; Brettauer 2662.

77 *Obv*: Same as preceding.

Rev: In field: RECOGNITA / ITER·ET AUCTA / PHARMAC· PARIS· / J·B·T·MARTINENQ / MED·FAC·DECANO / MDCCXLVIII· the last three lines in smaller letters. Above, a stork with branch in its beak; between third and fourth lines, a snake; and below, the chemical symbol, Saturn. Six other symbols: three at left, Sun, Mars, and Jupiter, and three at right, Moon, Venus, and Mercury.

Hist. met. 69; Fournié 75; Storer 2380; Desavis 95-96; Brettauer 2663; Army 1032.

78 *Obv*: Same as No. 76.

Rev: Arms of the Dean, in an oval shield within an elaborate cartouche with serpent-supports. The serpents, and an eye in the field above, are looking at a bow with three arrows pointed toward shield, in field at upper right. *Legend*: on a semicircular band, PRÆVISA FERIENT MINUS Exergue: M·J·B·T·MARTINENQ / PARIS· ITER·DEC. / 1749-1750

Hist. met. 70; Fournié 76; Brettauer 2664.

Two hybrid restrikes are here omitted from the list of authentic jetons: 76 *rev.* / 78 *rev.* (Storer 2378; Brettauer 2665) and 77 *rev.*/ 78 *rev.* (Fournié 77; Storer 2377 — 2379). Storer undoubtedly intended, however, to describe No. 78, under his No. 2377, judging from his reference to Fournié 76.

MULES

The obverse portrait type is combined with the following:

1. 43 *rev.* (Fournié 42 — Storer 2375)
2. 48 *rev.* (Fournié 039 — Storer 2374)
3. M28 (Fournié 050 — Storer 2376)

LII. HYACINTHE-THEODORE BARON, JR. (1750-1754)

79 *Obv*: Bust in profile to right, in usual costume. *Legend*: HY.THEOD. BARON DECANUS At left, below, D.V. [Jean DuVivier].

Rev: Arms of the Faculty, the storks two and one, that at left looking back to right; within an elaborate cartouche with pendant garlands. *Legend*: URBI ET ORBI SALUS Below, within a semicircular cartouche, FACULT·MEDIC·PARIS·1751·

Hist. met. 71; Fournié 79; Storer 183; Desavis 99-100; Brettauer 2667; Army 2875.

80 *Obv*: Same as No. 79.

Rev: In the field: SANCITIS / A SUPREMO SENATU / CONFIRMA-TISQUE / FACULTATIS / MEDICINÆ PARIS. / LEGIBUS. and below an exergue line, H.T.BARON DECANO / MDCCLI

Hist. met. 72; Fournié 78; Storer 180; Desavis 97-98; Brettauer 2666; Army 1005 and 2155.

81 *Obv*: Same as No. 79.

Rev: Same as No. 79, but date: 1754.

Hist. met. 73; Fournié 80; Storer 184; Desavis 101-102; Brettauer 2668; Army 357.

Storer 181 and 182 are to be dropped. Feuardent in the reverse description of his 4609 [*sic*] does give DOYEN instead of DECANO, but this is presumed to be an erroneous reading, since Fournié cites this piece as an example of his No. 78 (our 80). Storer 182 is Feuardent 4613. However, the latter is said to be the same as 4611 (— Fournié 79) with the date 1754,

so it is actually our type 81 and a duplication of Storer 184. Storer 177 (79 *obv.* / 62 *rev.*) must also be omitted. It is not "unknown to Fournié." He calls attention (p. 114) to the fact that "l'auteur des intéressants articles du *Magasin Pittoresque* a confondu les jetons des deux Barons en ne les attribuant qu'à un seul personnage et que, par suite de cette confusion, le revers 60 [our 62] a été figuré avec, au droit, le buste de Baron fils, no. 78" [79].

On the evidence of the *Historia metallica*, Fournié 81 (Storer 173) is dropped from the decanal series. His hypothesis, however, is neatly confirmed. Fournié suggests (p. 131) that this jeton, which is a combination of the obverse portrait types of Baron father and son, was probably struck in a very limited quantity, as a memorial of the Baron family, and may never have been officially distributed. Dr. Leys tells us that only thirty pieces were struck "*post suos Decanatus*," and that "a Numismatum studiosis noscitur sub nomine gallico *Le Baron aux deux têtes*."

MULES

The obverse is found muled with the following:

1. 43 *rev.* (Fournié 42 — Storer 178)
2. 48 *rev.* (Fournié 040 — Storer 175)
3. 57 *rev.* (Fournié 55)
4. M24 (Fournié 028; Storer 176; Brettauer 2669)
5. M28 (Fournié 051 — Storer 179)

LIII. JEAN-BAPTISTE LOUIS CHOMEL (1754-1756)

82 *Obv*: Bust in profile to left, in usual costume. *Legend*: J·B·L·CHOMEL PARIS·F·M·P·DECANUS Below, J·D.V. [Jean DuVivier] and above signature, on fold of gown, 1756 [*See fig. 1.*]

Rev: Arms of the Faculty: the three storks "goose-stepping" to left; that at left with bill tilted up; the one in the middle, bent down; and the third, level. *Legend*: URBI ET ORBI SALUS Exergue: FACULT· MEDIC·PARIS· / 1754·1755 / 1756.

Hist. met. 74; Fournié 82; Storer 635; Desavis 103-104; Brettauer 2670; Army 956; Jacobs.

83 *Obv*: As preceding, but smaller bust. Legend in larger letters. Signed, D.V.

Rev: Same as preceding, but struck direct.

Hist. met. 75.

This piece does not seem to have ever been found, and it is possible that it may never be—that is, that it does not exist. But since Dr. Leys has proved exceedingly accurate, the piece is included. The Chomel dies are not listed in the *Catalogue des Coins de la Monnaie*, not having survived.

LIV. JEAN-BAPTISTE BOYER (1756-1760)

84 *Obv*: Bust in profile to right, in usual costume and wearing cross of the order of Saint Michael. *Legend*: J·B·BOYER REG.S^{T} MICH. ORD.EQ.F.M.P.DEC.1756 Below, J·DU·VIV·

Rev: Arms of the Faculty. Same as that used on jeton of Caron, No. 57.
Hist. met. 76; Fournié 84; Storer 465; Desavis 105-107; Brettauer 2672; Army 2289.

85 *Obv*: Same as preceding.
Rev: Same as reverse of jeton of Hecquet, No. 43.
Hist. met. 77; Fournié 85; Storer 463; Desavis 108-109; Brettauer 2673.

86 *Obv*: Same as No. 84.
Rev: The arms of the Dean within the collar of the order of Saint Michael in a crowned cartouche framed by laurel. Exergue: a star-studded crown (*Corona stellata Facultatis*) over crossed maces, resting on a pillow. Struck direct.
Hist. met. 78; Fournié 83 — Storer 461; Brettauer 2671.

87 *Obv*: Same as No. 84.
Rev: Same as preceding, but in place of objects in exergue: ITERUM DECAN· / 1758.
Hist. met. 79; Fournié 86; Storer 460; Desavis 110-111; Brettauer 2674; Army 963; Jacobs.

Storer 462 and 467 are omitted. The first, based on Duisburg, is a variant of his 463 (No. 85), with the artist's signature in full. It is not, as indicated, in Storer's collection; the asterisk belongs with No. 463. Since it cannot, therefore, be confirmed, we are considering it as improbable. The description of Storer 467 did not originate with Duisburg, but it too can not be substantiated. Its existence is most dubious, and certainly an "Arms of the Faculty. Ex. 1756" cannot be correctly described as a "Mule of jeton of Chomel."

MULES

The obverse die is found in the following combinations. It must be admitted that some of the authentic jetons might be considered mules. They are nevertheless verified re-uses of existing dies. The method of manufacture can be relied upon to differentiate between them and the true hybrids.

1. 43 *rev.* (Fournié 42 — Storer 464)
2. 48 *rev.* (Fournié 041 — Storer 459; Army 1011)
3. 90 *rev.* (Fournié 88; Storer 466)
4. 92 *rev.* (Fournié, p. 172, n. 1; Brettauer 2675)
5. 93 *rev.* (Fournié, p. 172, n. 1; Brettauer 2676)
6. 95 *rev.* (Fournié, p. 172, n. 1; Brettauer 2677)
7. 96 *rev.* (Fournié, p. 172, n. 1; Brettauer 2678)

LV. JEAN LE THIEULLIER (1760-1762)

88. *Obv*: Bust in profile to right, in usual costume. *Legend*: J. LE THIEULLIER PARIS· F·M·P·DECAN· Below, B·DUVIVIER [Pierre-Simon Benjamin DuVivier].
Rev: Arms of the Faculty. Same as that used on jeton of Caron, No. 57.
Hist. met. 80; Fournié 90.

89 *Obv*: Same as preceding.
Rev: Arms of the Dean, within a crowned cartouche, with supporters in the form of seated figures of Hercules. At lower right, B.DUV. [*See fig. 3.*]
Hist. met. 81; Fournié 87; Storer 2126; Desavis 112; Brettauer 2679; Army 2148; Jacobs.

90 *Obv*: Same as No. 88.
Rev: Arms of the Faculty: storks, two and one, within an elaborate cartouche formed by serpents interlaced with acanthus leaves and scrolls. *Legend*: URBI ET ORBI SALUS Exergue: FAC·MEDIC·PAR· / 1760·1761· / 1762· [*See fig. 2.*]
Hist. met. 82; Fournié 88; Storer 2125 (restrike); Desavis 113-115; Brettauer 2680; Army 1030.

Fournié 89 is dropped from the decanal series—the reverse lacks the date 1762. Feuardent 2628, on which it is based is said to be a cliché, probably a trial piece, and it is doubtful that it was ever used for an official jeton. This piece is listed by Storer as No. 2124. His numbers 2127 and 2128 are also omitted. Feuardent 4627, the source of the first, is a restrike of 4625 (our No. 89). The signature as given by Storer on the reverse is correctly placed on the obverse in the Feuardent description. This early catalogue does give the signature of I. DuVivier on the obverse of 4626 (= Storer 2128) and Fournié mentions the piece (p. 136, n. 1).

MULES

The obverse type is muled with the following:

1. 43 *rev.* (Fournié 42 = Storer 2122)
2. 57 *rev.* (Fournié 55)
3. M28 (Fournié 052 = Storer 2123)

LVI. JEAN-JACQUES BELLETESTE (1762-1766)

91 *Obv*: Bust in profile to right, in usual costume. *Legend*: JO.JAC.BELLETESTE PARIS.FAC.MED.P.DECAN. Below, B.DUVIVIER.
Rev: Arms of the Faculty: the three storks marching to left. *Legend*: URBI ET ORBI SALUS Exergue: FAC.MEDIC.PAR. / 1762·1763.
Hist. met. 83; Fournié 91 = Storer 253.

92 *Obv*: Same as No. 91.
Rev: Arms of the Faculty: storks rather crowded in a cartouche, open at the top; the stork at left looking back. *Legend*: URBI ET ORBI SALUS In a semicircular scroll below, in minute characters, FAC·MEDIC·PARIS· 1762.63.64.
Hist. met. 84; Fournié 92; Storer 254; Desavis 116; Brettauer 2681.

93 *Obv*: Same as No. 91.
Rev: Arms of the Faculty. Same general type as No. 91, but different die, with slight variations, and in exergue: ITERATO DECAN. / 1764.65.66.
Hist. met. 85; Fournié 93; Storer 255; Desavis 117; Brettauer 2682.

MULES

The obverse die is combined with the following:

1. 43 *rev.* (Fournié 42)
2. 57 *rev.* (Fournié 55)
3. 81 *rev.* (Fournié 80 — Storer 262; Brettauer 2684)
4. M28 (Fournié 054, but correctly numbered 053 on Plate XIII)
5. M29 (Fournié 031; Storer 257; Brettauer 2685)

There is no substantiation for the obverse die of Storer 251, on which the final word in the legend is written in full, DECANUS. It would be a variant of the third type of mule. Such a reading has never been noted on the authentic pieces.

LVII. PIERRE BERCHER (1766-1768)

94 *Obv*: Same as No. 91.
Rev: Arms of the Faculty: the three storks marching to left, the one at right looking back. *Legend*: URBI ET ORBI SALUS Exergue: FAC·MEDIC·PAR· / 1766.1767· [*See fig. 2.*]
Hist. met. 86; Fournié 94 — Storer 256; Desavis 118; Brettauer 2683.

95 *Obv*: Bust in profile to left, in usual costume. *Legend*: PETRUS BERCHER PARIS.FAC.MED.P.DECAN. Below, B DUVIV·
Rev: Same as the preceding.
Hist. met. 87; Fournié 95; Storer 288; Brettauer 2686.

96 *Obv*: Same as preceding.
Rev: Arms of the Faculty: new die, storks all marching straight ahead. *Legend*: URBI ET ORBI SALUS Exergue: FAC·MEDIC·PAR· / 1766.67.68.
Hist. met. 88; Fournié 96; Storer 289; Desavis 119; Brettauer 2687.

Dr. Leys lists No. 94, without comment, as the first of the Bercher jetons, rather than the last of the Belleteste jetons, as Fournié and others who have followed him. We have chosen to follow the *Historia metallica*, and that the reverse die was originally engraved for Bercher would seem to be confirmed by the *Catalogue manuscrit des coins*, which lists two dies with the Faculty arms (Nos. 856 and 858, cf. Fournié, p. 14), dated respectively 1767 and 1768, which were struck with the Bercher die. One might note that they list three varieties of the arms, struck with the Belleteste portrait, dating in 1763, 1764, and 1766, corresponding in every detail to the three types described above (Nos. 91-93).

MULES

The Bercher portrait is found muled with the following:

1. 43 *rev.* (Fournié 42 — Storer 284)
2. 48 *rev.* (Storer 283)
3. 56 *rev.* (Fournié 54 — Storer 286)
4. 57 *rev.* (Fournié 55 — Storer 287)
5. M28 (Fournié 055 [Pl. XIII, 054] — Storer 285)

LVIII. LOUIS-PIERRE-FÉLIX-RENÉ LE THIEULLIER (1768-1774)

97 *Obv*: Bust in profile to left, in usual costume. *Legend*: L·P·F·R·LE THIEULLIER PARIS F·M·P·DECANUS Below, ROETTIERS FILIUS [Charles-Norbert Roettiers].

Rev: Arms of the Dean. Same general type as on jeton of Jean Le Thieullier (No. 89), but considerable variation in the supporting figures of Hercules. In exergue: "corona stellata" over crossed maces on a pillow, as on jeton of Boyer (No. 86); at left, between ends of maces, 1768, and at right, 1769

Hist. met. 89; Fournié 97; Brettauer 2688.

98 *Obv*: Same as preceding.

Rev: Same as preceding, but in exergue, above other dates, at left, 17 and at right, 70 has been added.

Hist. met. 90; Fournié 98; Desavis 120-121; Brettauer 2689; Army 1031.

99 *Obv*: Same as No. 97.

Rev: CHEMIÆ / CURS·INSTITUT· / 1770 / INAUGUR· / M·AUG· ROUX / 1771 within a band which is divided into three parts by trefoils within circles. On the band, in the three spaces: ELECTUS 1768 CONFIRM.1770 ITER·ELECT·1772 [*See fig. 3.*]

Hist. met. 91; Storer 2129; Desavis 122-123; Army 2291.

100 *Obv*: Same as No. 97.

Rev: Same as preceding, except for INAUGUR. read INAUGURAVIT

Hist. met. 92; Fournié 99; Storer 2130; Brettauer 2690.

Dr. Leys contributes an interesting comment, pointing out that the "*folia* [*trifolii*] *sunt gentilitiae tesserae Decani.*" See the similar leaves on his arms.

MULES

The obverse type is found muled with the following:

1. 43 *rev.* (Fournié 42 — Storer 2131)
2. 57 *rev.* (Fournié 55 — Storer 2132)

LIX. JACQUES-LOUIS ALLEAUME (1774-1776)

101 *Obv*: Bust in profile to right, in usual costume. *Legend*: JAC·LUD· ALLEAUME PARIS·FAC·MED·P·DECAN Below, B.DUVIV.

Rev: Arms of the Dean. In exergue: 1774·1775

Hist. met. 93; Fournié 100; Storer 57; Desavis 124-126; Brettauer 2691; Army 960 and 1138; Jacobs.

102 *Obv*: Same as preceding.

Rev: Scene commemorating the transfer of the Faculty from the old building on the Rue de la Bucherie, which was in a state of collapse, to one on the Rue Jean-de-Beauvais, which had been vacated by the Écoles de Droit. A winged Genius, personifying the government, walking toward the entrance of the Faculty's new home, carrying the staff of Aesculapius with entwined serpent, placing the end on the steps. With his left hand, he gestures towards the ruins of the old building behind

him, at right. On a stone in the ruins, D·V. [Benjamin DuVivier]. *Legend*: TUTO DONEC AUGUSTE Exergue: VET.JURIS SCHOLÆ / MEDICOR·REFUG· / 1775·

Hist. met. 94; Fournié 101; Storer 54; Desavis 127-128; Brettauer 2692; Army 2822.

The author of the *Historia metallica* notes that two or three pieces of this last type were struck in gold. Fournié (p. 143) mentions one such piece which was exhibited at the Bibliothèque nationale in 1906.

MULES

The obverse portrait type is muled with the following:

1. 43 *rev.* (Fournié 42 — Storer 52)
2. 57 *rev.* (Fournié 55 — Storer 55)
3. 68 *rev.* without date (Storer 56; Army 1002)
4. M25 (Fournié 029; Storer 53; Brettauer 2693)

LX. JEAN-CHARLES DESESSARTZ (1776-1779)

103 *Obv*: Bust in profile to left, in usual costume. *Legend*: JOAN·CAR· DESESSARTZ LING·FAC·MED·P·DEC· Below, B. DUVIV. [*See fig. 1.*]

Rev: Arms of the Dean. Exergue: 1776-1777

Hist. met. 95; Fournié 102; Storer 830; Desavis 129-130; Brettauer 2694; Army 2554.

104 *Obv*: Same as preceding.

Rev: In the field, SECTIO / SYMPHYS.OSS.PUB. / LUCINA NOVA / ——— / 1768 / INVENIT, PROPOSUIT / 1777 / FECIT FELICITER / J.R.SIGAULT D.M.P. / JUVIT / ALPH·LEROI / D.M.P. [*See fig. 3.*]

Hist. met. 96; Fournié 103; Storer 828; Desavis 131-132; Brettauer 2695; Army 1507; Jacobs.

Another example of the obverse cliché, Storer 831, is in the Jacobs Collection.

MULES

The obverse die is found muled with the following:

1. 43 *rev.* (Fournié 42 — Storer 827)
2. 48 *rev.* (Fournié 042 — Storer 825)
3. 57 *rev.* (Fournié 55 — Storer 829)
4. 110 *rev.* (Storer 826)

LXI. THOMAS LE VACHER DE LA FEUTRIE (1779-1780)

105 *Obv*: Bust in profile to right, in usual costume. *Legend*: THOM.LE-VACHER DE LA FEUTRIE EBROIC.S.FAC.P.DEC. Below, B. DU VIVIER [*See fig 1.*]

Rev: Arms of the Dean in escutcheon, supported by two storks, and surmounted by a hat, on which a garland of oak. In exergue: 1779 · 1780 [*See fig. 3.*]

Hist. met. 97; Fournié 104; Storer 2134; Desavis 133-135; Brettauer 2696; Army 968; Jacobs.

MULES

The obverse is found combined with the following:

1. 43 *rev.* (Fournié 42)
2. 57 *rev.* (Fournié 55 — Storer 2137)

The reverse is found with the following:

3. M20 (Fournié, p. 174 — Feuardent 4665 — Storer 2135)

Storer's description of 2135 is wrong, as an examination of the piece has shown. It is the Dean's arms over the arms of Mouricault, as is Feuardent 4665. Since Fournié cites the latter, Storer 2136 is a duplication.

LXII. JOSEPH PHILIP (1780-1782)

106 *Obv*: Bust in profile to left, in usual costume. *Legend*: JOS·PHILIP INTERVALL·GLANDAT·SAL·FAC·P·DEC· Below, B DUVIVIER

Rev: Alexander the Great reclining to left on a canopied bed, drinking from a goblet. In front of the bed, his physician, Philip, stands to right, reading the letter by which he was falsely accused. Leaning against the bed, a shield with the device of a head and bolts of lightning. *Legend*: EX FIDE FIDUCIA Exergue: 1780·1781

Hist. met. 98; Fournié 105; Storer 2817; Desavis 136-138; Brettauer 2697; Jacobs.

107 *Obv*: Same as the preceding.

Rev: Same as the preceding, but added as a second line in the exergue, 82

Hist. met. 99; Fournié 106 — Storer 2818; Desavis 139; Brettauer 2698.

MULES

The obverse die is muled with the following:

1. 43 *rev.* (Fournié 42 — Storer 2819)
2. 48 *rev.* (Fournié 043 — Storer 2815; Army 1024)
3. 57 *rev.* (Fournié 55 — Storer 2822 and 2823; Brettauer 2699)
4. 108 *rev.* (Fournié 107 — Storer 2820)
5. M22 (Fournié 019 — Storer 2816; Brettauer 2700; Army 1023)
6. M30 (Fournié 032 — Storer 2821; Brettauer 2701; Army 967)

LXIII. ÉTIENNE POURFOUR DU PETIT (1782-1784)

108 *Obv*: Bust in profile to right, in usual costume. *Legend*: ST·POURFOUR DU PETIT PARIS·FAC·MED·PAR·DEC·. Below shoulder, DUVIV· [Benjamin DuVivier]. [*See fig. 1.*]

Rev: Hygeia, in classic draperies, sacrificing at an altar on which a fire is

burning; her snake slung over left arm. To right of her foot, DV *Legend*: PRO REGE REGNO ET UNIVERSIT.PARIS. Exergue: PRECES FUND. 1782 the last figure written backwards. [*See fig. 4.*]

Hist. met. 100; Fournié 107; Storer 927; Desavis 140-143; Brettauer 2702; Jacobs.

Dr. Leys notes that five jetons were struck in gold. Two, the only gold jetons in the collections studied by Fournié, are in the Cabinet des Médailles (p. 35), a third is in the Gilbert Collection.

The obverse has been found muled with the following:

1. 43 *rev.* (Fournié 42)
2. 48 *rev.* (Fournié 044)
3. 57 *rev.* (Fournié 55)
4. M31 (Fournié 033 — Storer 926; Brettauer 2703; Jacobs)
5. M35 (Fournié 030)

LXIV. JEAN-CHARLES-HENRI SALLIN (1784-1786)

109 *Obv*: Bust in profile to right, in usual costume. *Legend*: J.CAR.HEN. SALLIN GRAYACUS FAC.MED.P.DEC Below, DU VIV. [Benjamin DuVivier]. [*See fig. 1.*]

Rev: Arms of the Dean in escutcheon. Exergue: 1784·1785 [*See fig. 4.*]

Hist. met. 101; Fournié 108; Storer 3177; Desavis 144-145; Brettauer 2704; Army 404; Jacobs.

Since Feuardent 4676 is cited by Fournié as an example of his 108, it may be presumed that Storer 3178 is a duplication.

MULES

The obverse is found muled with the following:

1. 43 *rev.* (Fournié 42 — Storer 3175)
2. 48 *rev.* (Storer 3174 — Army 1041)
3. 57 *rev.* (Fournié 55 — Storer 3176)
4. 68 *rev.* with date effaced (Brettauer 2705)

LXV. EDMOND-CLAUDE BOURRU (1786-1793)

110: *Obv*: Bust in profile to left, wearing civilian clothes. *Legend*: EDM.CL. BOURRU PARIS.FAC.MED.PAR.DECANUS. Below, B. DUVIV.

Rev: Two draped female figures, representing Concordia and Constantia, clasping hands. One is seated, the other standing with her left hand resting on a fasces. In background, at right, part of a pyramid. On stone, on which figure sits, D.V· *Legend*: CONCORDIA ET CONSTANTIA VINCENT Exergue: 1786·87· [*See fig. 3.*]

Hist. met. 102; Desavis 150.

111 *Obv*: Same bust as preceding. *Legend*: EDM.CL.BOURRU PARIS.FAC.

MEDIC.PAR.DECAN Below, DU VIV· continuing curve of legend. [*See fig. 1.*]

Rev: Same as preceding.

Hist. met. 103; Fournié 109; Storer 446; Desavis 146-148; Brettauer 2706; Army 29 and 367; Jacobs.

112 *Obv*: Same bust as preceding, but lower relief, and with line of truncation extending across front. Same legend. Signature: DU VIVIER (often with R indistinct) in a curve tangent to truncation.

Rev: Same as No. 110.

Fournié, p. 154, *obv.* type illustrated Pl. IX; Storer 447; Desavis 149; Army 683.

113 *Obv*: Same as No. 111.

Rev: In eight parallel lines, within a circle open at bottom: LECTIONES / PUBLIC·GALL·IDIOM· / DE ANATOM· ET CHIRUR· / IN SCHOLIS MEDIC·PAR· / INSTITUTÆ / EX LIBERALITATE / CL·M·A·PETIT / MDCCLXXXVII *Legend*: EDM/CL· BOURRU PARIS·SAL·FAC·PAR·DECANO 1787·88.

Hist. met. 104; Fournié 110 — Storer 449; Desavis 151-152; Brettauer 2707; Army 366.

114 *Obv*: Same as No. 111.

Rev: In the field: HUJUS FILIUM / A SAL·FAC·P·ADSAC· / BAPT· FONTES OBLATUM / CL·FELIC·HIPPOCRATEM / M·FR· FELICET· COCHU / SCHOL·PENE ANTIQUIOR / NOMINAVIT / DIE XI. SEPT. / MDCCXC Below, in a curved scroll, IT·EL·1788 CONF·1789

Fournié 111; Storer 451; Desavis 154, 155 (restrike); Brettauer 2708; Army 1231.

115 *Obv*: Same as No. 112.

Rev: Same as No. 113.

Storer 450 — Feuardent 4686 (?); Desavis 153 (struck direct); Jacobs (struck direct).

116 *Obv*: Same as No. 112.

Rev: Same as No. 114.

Storer 452 — Feuardent 4689 (?); Army 1009.

These last two pieces probably should not be included in the decanal series. Feuardent 4686 and 4689 are cited respectively by Fournié for Nos. 113 and 114. The other examples of the combinations are correctly described but are definitely restrikes. The specimen of No. 115 in the Jacobs Collection bears the "pointing-hand" punch mark, indicating that it was struck between 1845 and 1860. If it were not for the fact that No. 112 seems to be authentic, we would be inclined to believe that the variant of the obverse type was not contemporary. We have not given a number to another supposed variant of 111 *obverse*, said to be signed: B·DU·VIV. (Feuardent 4682; Fournié, p. 154 — Storer 448). The reading may be correct, but it is impossible to determine with which treatment of the lower part of the bust it was used, as this rather important difference has not been noted by any previous writer. It should be pointed out, in deference to Dr. Leys, that No. 114 could not have been included in his catalogue, since it was struck in 1790.

MULES

1. 111 *obv.* / 43 *rev.* (Fournié 42 — Storer 453)
2. 111 *obv.* / 57 *rev.* (Fournié 55)
3. 111 *obv.* / M32 (Fournié 034; Storer 455; Brettauer 2709)
4. 112 *obv.* / 68 *rev.* with date effaced (Storer 454; Army 1010)

CATALOGUE OF DIES FOUND MULED WITH DIES FROM THE DECANAL SERIES

We are adding brief descriptions of the dies, originally struck for some other purpose, which have been found combined with dies, usually the obverse portrait-types, from the series of the "jetons des doyens." References are cited, whenever possible, to a description and especially to an illustration of the original piece. Descriptions of the "uncombined face," as a rule the obverse, are not included. In one instance, M14, both faces of the original combination were re-used with dies from the decanal series. The dates usually in the exergue, are generally, though not always, effaced in the hybrid combinations.

ROYAL

M1 Anne of Austria.

Rev: Within a circle, a bird standing on its nest on water; in background, three ships; above, clouds. *Legend*: · OMNIA · TVTA · VIDET · Exergue: · 1663 ·

De La Tour 1260 (Pl. XXV, 6);[36] Coll. Rouyer 2208;[37] Fournié, p. 164. See No. 19.

M2 Louis XIV. But with the date 1662.

Rev: Boat with full sails passing before a port, the entrance to which is guarded by two towers. Upper part of scene framed by semicircle, above which the *legend*: ·NEC · METAS · RERVM· Exergue: · 1661 ·

De la Tour 1421, 1425, 1985 (Maria-Theresa), Pl. XXXII, 7; Coll. Rouyer 2419 (Maria-Theresa); Fournié, Pl. X, 07.
See No. 21.

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[36] Henri de la Tour, *Catalogue des jetons de la Bibliothèque nationale. Rois et Reines de France* (Paris, 1897).

[37] Henri de la Tour, *Catalogue de la Collection Rouyer leguée en 1897 au Département des médailles et antiques* (Bibliothèque nationale, Département des médailles), Part II, *Jetons et méreaux de la renaissance et des temps modernes* (Paris, 1910).

M3 Louis XIV.

Rev: Within a circle broken at bottom by exergue line, radiant sun over landscape. *Legend*: ·PVRGAT · CVM · RENOVAT· Exergue: · 1664 · [*See fig. 4.*]

De la Tour 1453, Pl. XXVII, 13; Fournié, Pl. X, 012.
See Nos. 19 and 21.

M4 Louis XIV.

Rev: Within a circle broken at bottom by exergue line, radiant sun above a plain from which rise four columnar clouds, like whirlwinds. *Legend*: ·VT · IRRIGET · IMBRE · BENIGNO· Exergue: ·1664·

De la Tour 1455, Pl. XXVII, 12; Coll. Rouyer 2316; Fournié, Pl. X, 011.
See Nos. 19 and 21.

M5 Louis XIV.

Rev: Hercules slaying the Hydra. At lower right, above exergue line, D F. [Dufour]. *Legend*: IE·NE·ME·LASSE·POINT·DE·VEINCRE· Exergue: · 1674 ·

De la Tour 1522, Pl. XXVIII, 15; Coll. Rouyer 2373; Fournié, Pl. X, 014.
See No. 28.

M6 Louis XIV. Struck for the Peace of Nimègen.

Rev: Within a circle broken by exergue line, a caduceus upright, resting on ground. *Legend*: · SVPERAS · EDVCIT · AD · AVRAS · Exergue: ·1678·

De la Tour 1547, Pl. XXIX, 5; Fournié, Pl. X, 016.
See No. 29.

M7 Maria Theresa. The same design is used with a jeton of Anne of Austria (De la Tour, 1262, Pl. XXV, 7), but the die is different—note especially the arrangement of the stars.

Rev: Within a circle broken by the exergue line, a large star and seven smaller stars, and at right, the rising sun with clouds above; in foreground, landscape. *Legend*: · SOLA · SOLEM · PARIT · Exergue: ·1664·

De la Tour 1995, Pl. XXXII, 9; Coll. Rouyer 2421; Fournié, Pl. X, 013.
See No. 21.

M8 Maria Theresa.

Rev: Within a circle broken by exergue line, rays shining from upper left upon a pearl within an open oyster shell, which rests on a reef in the middle of the sea. In the sky, clouds. *Legend*: · NITET · QVIA · CŒLO · PATET · Exergue: ·1676·

De la Tour 2053, Pl. XXXIII, 12; Fournié, Pl. X, 15.
See Nos. 28 and 29.

M9 Uncertain. For this reverse struck with an obverse of a jeton of the École de chirurgie, cf. Feuardent 4709, 4716.

Rev: In foreground, a vessel proceeding under full sail; above, the radiant sun, and, at right, rain falling from clouds. *Legend*: on a semi-circular band above, VNVS · QVI · CVNCTA · SERENAT

Fournié, Pl. X, 022.

See Nos. 21, 28, 29, 44 and 57.

MAISON ROYAL

M10 Gaston de France, Duc d'Orleans.

Rev: Two wreaths, formed of branches of laurel crossed and tied at the bottom, accolated. *Legend*: · IN VTRAMQVE PARATVS · Exergue: ·1645·

Pradel 333;[28] Fournié, Pl. X, 05.

See No. 6.

M11 The same.

Rev: Atlas striding to left, holding on his bent shoulders a globe, ornamented with vertical bands of stars, and encircled by a zodiacal band. *Legend*: ·IPSE · SVBIBO HVMERIS· Exergue: ·1646·

Pradel 334; Fournié, Pl. X, 06.

See No. 6.

M12 Louis de Bourbon, comte de Vermandois.

Rev: Within a circle broken by exergue line, waves beating against a high rock. *Legend*: OCEANO · SVRGIT · METVENDVS Exergue: ·1679·

Pradel 446, Pl. XIV, 5; Feuardent 1213; Fournié, Pl. X, 017.

See No. 12.

ADMINSTRATIONS

M13 Conseil du Roi.

Rev: A celestial sphere. *Legend*: · REGIT · VNICVS · OMNES · Exergue: ·1662·

Coll. Rouyer 2707; Feuardent 232; Fournié, Pl. X, 09.

See Nos. 19 and 21.

M14 Justice.

Obv: Justice, a draped female figure, standing facing, holding an open book in her right hand, and balances in her left. *Legend*: IVSTITIA· SIMVL·ET·CVRA Exergue: ·1659· [*See fig. 4.*]

Rev: A nude, bearded man, Time (? or Hercules), his left foot on a small globe, prying open the lid of a strong box with a long-handled scythe. *Legend*: MAGIS · ABDITA · SOLVO [*See fig. 4.*]

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[28] Pierre Pradel, *Catalogue des jetons des princes et princesses de la maison de France* (Bibliothèque nationale, Département des Médailles), Paris, 1936, Éditions des Bibliothèques nationales.

De la Tour 1398; Feuardent 344; Fournié, Pl. X, 023, and 01 following. For the obverse see Nos. 19, 21, 28, 29, 43, 44 and 57; for the reverse see Nos. 6, 21, 28, 29, 43 and 57.

M15 Chambre de Justice.

Rev: Flames rising from a tripod brazier, with supports in the form of birds, with ring-handles in their beaks. *Legend*: · AVRVM · OMNE · PROBABIT · Exergue: ·1662·

De la Tour 1427; Feuardent 1822; Fournié, Pl. X, 08.
See Nos. 19 and 21.

M16 Justice.

Rev: Justice, a draped female seated three-quarters to right, and facing, holding scales in left hand and sword in right. *Legend*: · NEC · PRECE · NEC · PRETIO Exergue: · 1664 ·

Fournié, Pl. X, 010.
See No. 21.

M17 Chambre des Comptes du Roi: Maitres des Requêtes et Correcteurs des Comptes.

Rev: Justice seated to right, holding a sword and balances. *Legend*: HÆC · ALTERA · NESCIA · FALLI · Exergue: ·1644·

Feuardent 1806. See also Feuardent 6531 *reverse*, and Coll. Rouyer 2836 ff.
See No. 6.

M18 Parties Casuelles.

Rev: A pear-tree with fruit. *Legend*: · FACIT · CVLTVRA · FERACEM · Exergue: ·1660·

Coll. Rouyer 2994; Feuardent 2616.
See No. 19.

M19 Batiments du roi. Also dated 1662.

Rev: Construction of the Louvre. Façade of a building, with workmen putting columns in position on second story. *Legend*: SILEANT· MIRACVLA Exergue: ·1663·

De la Tour 1436, Pl. XXVII, 5; Feuardent 2968.
See No. 19.

M20 Commissaires du Chatelet.

Obv: Shield with family arms. *Legend*: DV·DOYENNE·DE·M· MOVRICAVLT·1779· [*See fig. 4.*]

Feuardent 3264.
See No. 105.

SOCIETIES AND ACADEMIES

M21 Académie des Sciences.

Rev: Minerva, draped and helmetted, seated three-quarters to left, with head in profile. On the ground, and at right and left, attributes of science.

Legend: INVENIT ET PERFICIT. Exergue: REG.SCIENT. ACAD. / 1716.

Fournié, Pl. XI, 026.
See No. 48.

M22 Société Philanthropique, Paris.

Obv: Hand extending into field from upper right, pouring contents of a pitcher on earth below. At upper left, zodiac; and in right distance, buildings. Upper part of field partially enclosed by semicircular line, above which *legend*: DONEC E CŒLO DESCENDAT Exergue: 1781

Feuardent 4478; Fournié, Pl. X, 019.
See No. 106.

M23 Académie royale de Chirurgie.

Rev: Apollo holding his lyre, standing at left, his arm about the shoulders of Hygeia, who leans upon her staff with entwined serpent. On the ground, at right and left, plants and surgical apparatus. *Legend*: APOLLO SALUTARIS Exergue: SOCIETAS ACADEMICA / CHIRURG·PARISIENS / MDCCXXXXI· Signed at lower right, M [François-Joseph Marteau].

Lacronique, pp. 44-45, Pl. II, 4;[29] Feuardent 4727; Fournié, Pl. XI, 027.
See No. 69.

M24 Académie royale de Chirurgie.

Rev: Minerva seated to left, her left hand resting on her shield, on which head of Medusa; on her knees is an open book. Before her stands a small Genius holding a shield with the arms of La Peyronie. On the ground, surgical instruments, and, at left, by child's leg, D.V. [Jean Duvivier]. *Legend*: COLIT ET COLITUR Exergue: ACAD. REG.CHIR· / ·MDCCLI·

Lacronique, p. 50, Pl. II, 6; Storer 6647; Feuardent 4734; Fournié, Pl. XI, 028.
See No. 79.

M25 Académie royale de Chirurgie.

Rev: Façade of the new building of the School and Faculty of Medicine. *Legend*: SALUTI PUBLICÆ Exergue: SCHOLÆ REGIÆ / CHIRURG·PAR· / 1775

Lacronique, p. 54, Pl. II, 12; Feuardent 4738; Fournié, Pl. XI, 029.
See No. 101.

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[29] Dr. R. Lacronique, *Étude historique sur les Médailles et Jetons de l'Académie royale de Chirurgie (1731-1793)*, nouvelle édition revue et augmentée. Extrait du *Bulletin de la Société française d'Histoire de la Médecine*, 1903. The first article was published in the *Gazette numismatique française*, 1902, pp. 238-294. Plate II of the monograph = Pl. VII of the *Gazette*.

M26 Chirurgiens-Barbiers.

Rev: Within a beaded circle, broken at bottom by exergue line, a right hand, projecting into field from right, grasping a serpent. Above, a radiant sun and clouds. Below, landscape. *Legend*: PRVDENTIS·MANVS·MORBORVM·CVRATIO Exergue: ·1645·

Catalogue manuscrit des coins de la Monnaie de Paris, Règne de Louis XIV, No. 103 (Fournié, p. 10).

See No. 6.

M27 The same, but with date 1646. [*See fig. 4.*]

Catalogue manuscrit . . . , No. 116, Feuardent 4743; Fournié. Pl. XI, 025.

See Nos. 6, 21, 28 and 29.

MISCELLANEOUS PROVINCIAL

M28 Duché de Bar: Chambre de Comptes.

Rev: Within a circle, three pansies. *Legend*s PLVS * PENSER * QVE * DIRE * There are variant arrangements of the pansies, and different types of rosettes. [*See fig. 4.*]

Coll. Rouyer 4036 ff., Pl. LII, 6; Feuardent 7790 ff.; Fournié, Pl. XIII, 045-054.

See Nos. 6, 21, 28, 28, 44, 58, 61, 63, 64, 76, 79, 88, 91 and 95.

M29 Jetons des maires de Nantes.

Rev: The crowned arms of Léonard Joubert du Collet. Below, 1762 1763

Feuardent 8924; Fournié, Pl. XII, 031.

See No. 91.

M30 Jetons des maires de Nantes.

Rev: The crowned arms of Jean-Baptiste Gellée de Prémion. *Legend*: SIGNAT ITER exergue: 1780-1781

Feuardent 8931; Fournié, Pl. XII, 032.

See No. 106.

M31 Jetons des maires de Mantes.

Rev: The crowned arms of Jean-Jacques Berrouette. *Legend*: IN TE DOMINE SPERAVI Exergue: 1782 — 1783 [*See fig. 4.*]

Feuardent 8932; Fournié, Pl. XII, 033.

See No. 108.

M32 Jetons des maires de Nantes.

Rev: The crowned arms of Richard de la Pervanchère. Exergue: 1798 1788

Feuardent 8936; Fournié, Pl. XII, 034.

See No. 111.

M33 Bourgogne: Jetons des États.

Rev: Landscape, with the sun shining over a sun-dial. *Legend*: REGIT ME ET DIRIGIT ORBEM Exergue: 1725

Coll. Rouyer 3688; Feuardent 9836
See No. 60.

M34 Nivernais: comtes et ducs de Nevers: Louis de Gonzague et Henriette de Clèves. Original struck to honor their establishment of a fund to present doweries to sixty poor girls annually.

Rev: Within a circle, an altar, on face of which 1722 Above, the name of God in Hebrew characters, and manna falling from heaven.

Feuardent 10,451; Fournié, Pl. X, 018.
See No. 56.

M35 Lyons: School of Medicine.

Obv: Aesculapius standing at left, giving first aid to a wounded soldier seated on ground at right. *Legend*: AD VITAM ARTE REDUCIT

Feuardent 10,772; Storer 5949; Fournié, Pl. XI, 030.
See Nos. 24, 108.

BIBLIOGRAPHIES

AN EXHIBIT OF THE LIFE AND WORKS OF BENJAMIN RUSH, M. D.

GWYNNETH GMINDER

With a Check List of Rush's Writings in the Welch Medical Library

Compiled by HELEN WHEELER

It is not often that the occasion arises to celebrate the anniversary of the birth of an American physician as outstanding as Benjamin Rush. Unfortunately, his importance has been obscured behind his reputation for drastic therapeutics; namely severe bleeding and purging. It is necessary to look beyond this to the significance of his work with the insane, to his humanity, breadth of interest and to his citizenship. Today, it is only fair in celebrating the 200th anniversary of his birth to consider his wide social and political interests.

It is difficult to decide exactly when to hold a celebration in honor of Rush's birth. He was born on December 24, 1745, Old Style, but several years after his birth the calendar was changed to correct an error of eleven days. Accordingly, the date becomes January 4, 1746. Since the change is generally made in favor of this revision in the case of Washington and other contemporaries of his, it would seem best to consider 1746 the proper year. This being the case an exhibit on Rush which would last from December 1945 until well into 1946 would solve the problem adequately. Here at the Institute of the History of Medicine, an Exhibit of the Life and Works of Benjamin Rush was completed on December 17 and it is this exhibit which will be described in this article.

Originally the plan of the exhibit was such as to consider the life and works of Rush under several big headings: Rush as a Patriot, Rush as a Physician, Rush as an Educator and Humanitarian. This was dropped as being ineffectual because Rush himself was never working only as a physician or a patriot but always on several things at once. To give a picture of his life accurately, it has to be drawn chronologically. Only by this method could his energy, variety of interests and accomplishments be fully appreciated. Therefore, in so far as possible, events have been

PLATE I

View of the first half of the exhibit.

handled in chronological order. The following paragraphs summarize the life of Rush as it was handled in this exhibit.

Benjamin Rush was born on the family farm at Byberry, Pennsylvania. He was the fourth child in a family of seven. When he was a small child, his father, John Rush, sold the farm and moved to Philadelphia which was a thriving city, the center of the colonies. When John Rush died, Mrs. Rush opened a store and here Benjamin probably spent a good bit of his time.

Benjamin Rush was fortunate in having as an uncle by marriage, Dr. Samuel Finley, who was a Presbyterian minister. Dr. Finley had a church in the town of Nottingham in the colony of Maryland. In connection with the church he opened an academy for boys. It was a school with an excellent reputation and to it came the sons of prominent families of Maryland and Virginia. The names of future governors and leading citizens can be found upon its rolls. Rush was sent to Nottingham Academy, and he was greatly impressed by the school and its headmaster.

Through the influence of Finley, Rush was persuaded to go to the College of New Jersey (now Princeton) which Finley was later to serve as president. At Princeton, Rush was noted for his excellence as a public speaker and this made him think of the law as a career. Finley again influenced him this time away from law and suggested medicine.

Therefore, when Rush graduated from the College of New Jersey in 1760, he sought an apprenticeship as was customary. He became apprenticed to Dr. John Redman, a very prominent colonial doctor. Rush was with Redman nearly six years during which time he developed the notebook habit. For the rest of his life, he took voluminous notes on all he observed in medicine and in daily life. Rush spent little time for the lighter things for he was absent from work only eleven days and only three times did he spend a night away from Redman's house. He was a good student and Dr. Redman exhibited much confidence in him, allowing him charge of the patients after only a year's study.

Rush was also fortunate in being able to study anatomy under Dr. William Shippen, Jr. and materia medica under Dr. John Morgan.

At Redman's suggestion, Rush went to Edinburgh to study at the University. He was gone for two years and studied under Monro, *secundus*, Cullen, Black and Russell. Cullen's influence was very great, and Rush was to be Cullen's strongest propagandist in the colonies. While in Scotland, Rush was instrumental in persuading Dr. John Witherspoon to come to America as president of Princeton.

After receiving his M. D. degree in 1768, Dr. Rush went to London.

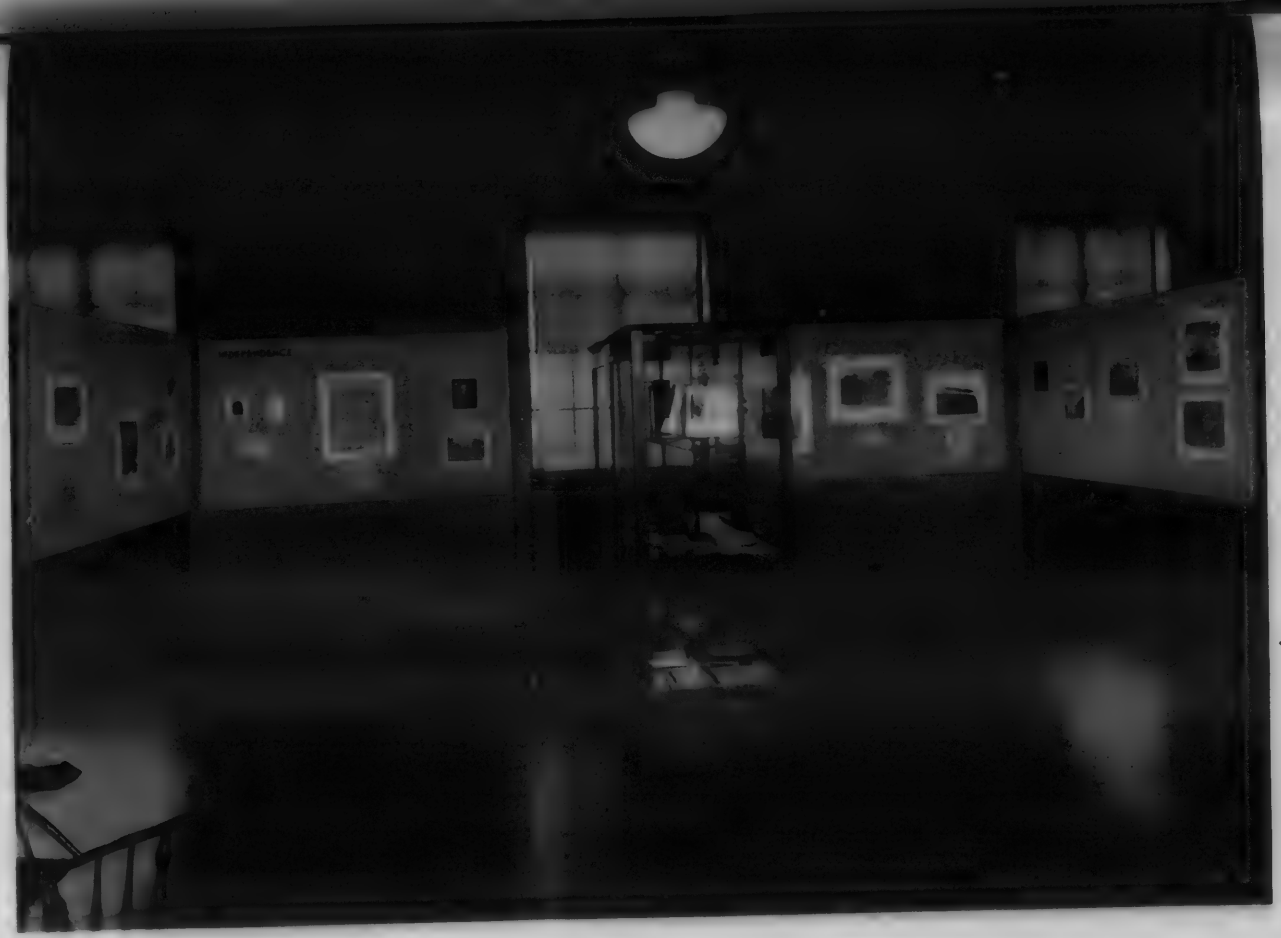

PLATE II

View of the central section of the exhibit.

Here, he studied at St. Thomas Hospital and took a course of lectures from Dr. William Hunter. Through Benjamin West, the painter, he met Sir Joshua Reynolds, Dr. Samuel Johnson and Oliver Goldsmith. With a letter of credit on a Paris banker from Benjamin Franklin, he went to France. As usual, Rush was probably more active with observing than in participating, for he wrote at length his opinions of the French.

In 1769 Benjamin Rush returned to Philadelphia. He was appointed Professor of Chemistry of the medical department of the College of Philadelphia. This was the first medical school to be founded in the colonies and on its faculty were Dr. Shippen, Jr., Dr. Morgan and Dr. Adam Kuhn. Rush at the age of twenty-three, became the first professor of chemistry in a medical school in America, and in 1770 published *A Syllabus of a Course of Lectures on Chemistry*, the first textbook on chemistry to be written by an American.

Rush was a determined supporter of the colonies and their rights. This liberalism did not help his practice because the Tories and the wealthy families of Philadelphia were suspicious of him. The fact that he was not closely attached to any one church, also, contributed to the lack of patients. Rush, therefore, turned to the poor people of Philadelphia and began to practise among them.

Rush was enthusiastic in his support of the system of Cullen. The doctors in the colonies had long been in favor of the system of Boerhaave who based his speculations on the humors, maintaining that disease was caused by morbid acrimonies and other matters in the blood. Cullen, on the other hand, based disease on disorders of the nerve force. Rush managed to antagonize many of the other physicians by his determined attempt to bring Cullen's ideas to America. In spite of his enemies, Rush was successful in this attempt for Cullen soon superseded Boerhaave.

The year 1772 was a busy one for Rush. He published a pamphlet against slavery which made him unpopular with the slave holders. Also, he was appointed one of the physicians of the House of Employment, the Almshouse (later Philadelphia General Hospital). In addition, he wrote one of his most delightful papers, *Sermons to Gentlemen upon Temperance and Exercise*, in which he recommends and describes the game of golf.

Rush first became engaged to Sarah Eve who died three weeks before their wedding day. It was through Dr. Finley, who was then in Princeton, that Rush met his future wife, Julia Stockton. Rush's marriage was an extremely happy one. There were thirteen children of whom nine

PLATE III

View of the last half of the exhibit.

lived to maturity. Two of Rush's sons became doctors and one, Richard, became famous as foreign minister to France and England and served as Secretary of the State and of the Treasury.

In 1775, Rush was elected president of the United Company for Promoting American Manufacturers, which brought the spinning jenny to America. Rush delivered an address about manufactures which was given at Carpenter's Hall and which was published in the *American Museum*, a magazine in which Rush often published his articles.

Rush was active from the first days of the American Revolution. When Thomas Paine wrote *Common Sense*, it was Rush who suggested the title and who was instrumental in having it printed. He admitted in later years that it was the kind of treatise that he would have liked to have written himself but did not dare because of his professional position.

Rush, however, was involved in the formation of the illegal revolutionary assembly of Pennsylvania and was elected a member of it. On June 24, 1776, he submitted a resolution demanding complete freedom from England. Consequently, he was elected a member of the Continental Congress but not until after the Declaration of Independence had been passed upon. Nevertheless, he signed the Declaration of Independence and his signature can be found between those of Benjamin Franklin and Robert Morris. Rush's temperament, however, was not suited to making compromise and he did not remain in public office long. Although he worked for a new state constitution and for the ratification of the new national constitution, he never held another elective office.

On the military side of the Revolution, Rush was for ten months a fleet surgeon in the Pennsylvania Navy, a group of small gunboats commissioned to protect the Delaware River near Philadelphia. Later, he was commissioned in the army medical department and took part in the Battle of Princeton and probably treated General Mercer who was wounded there.

Much has been written of the part Rush played in the Conway Cabal, a conspiracy aimed at removing Washington from his generalship. Certainly Rush, with good reason, was much disturbed with the way the medical department of the army was being run. William Shippen, Jr. can in light of the evidence be charged with administering this service very negligently. Rush was never a man to sit calmly on the sidelines and watch an injustice, and it is not surprising that he wrote letters of protest to General Washington. Shippen was court-martialed, but he was exonerated in all probability because more important events occurred which made this expedient. Rush, for his part, could never forgive this

neglect. Therefore, his anonymous letter to Patrick Henry which was passed on to Washington himself was more a protest than an act of treason.

As early as 1774, Rush became one of the physicians who inoculated patients against smallpox free of charge in the State House, and in 1786, he helped found the first Free Dispensary in the United States, the Philadelphia Dispensary for the Poor.

Rush realized the need for a society in which physicians could discuss their cases and theories. Although he planned to organize such a group during the Revolutionary War, he was not able to see the culmination in the College of Physicians of Philadelphia until 1788.

In the yellow fever epidemics of 1793, 1794 and 1797, Rush was heroic in his efforts to treat the sick. In the first of these epidemics, Bush Hill, the estate of William Hamilton was made into an emergency hospital. Here Peter Helm and Stephen Girard became superintendents and worked to bring order out of chaos. Rush visited patients until he contracted the disease and on his recovery continued to treat them. In his despair over the high mortality rate, he happened to think of an article by a Dr. Mitchell, which advocated purging as a cure for fever. Rush decided upon bleeding and purging as therapeutic measures. His prescription was 10 and 10—ten grains of jalap and ten grains of calomel, a mighty dose. He bled patients as much as 70 or 80 ounces in five days. Rush claimed that " at no period of the disease did I lose more than one in twenty of those whom I saw on the first day, and attended regularly through every stage of the fever; provided they had not been previously worn down by attending the sick." [1]

The influence of Rush was tremendous and all the practitioners for the next few generations copied him. It can be said with James Flexner that " until the middle of the nineteenth century most men who died on the North American continent had little Rushes standing by their bedside with lancets in one hand and vials of calomel in the other." [2]

Rush with his determination and unswerving support of what he believed the right thing naturally made many enemies. His most dangerous critic was William Cobbett who published a paper, *Porcupine's Gazette*, which was a direct attack on Rush and all he did. Cobbett opened fire with verse such as:

Times are ominous indeed
When quack to quack cries purge and bleed

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[1] Rush, *Account of Bilious Yellow Fever*, Phila., 1794, 315.
[2] Flexner, *Doctors on Horseback*, 57.

and captions such as:

Can the Rush Grow Up Without Mire?[8]

When his practice began to fall off, Rush sued Cobbett and ultimately won the case. Cobbett was forced to sell his printing office and move to New York. From here, he continued the attack with another paper directed against Rush entitled, *The Rush-Light*. This too was unsuccessful because by this time Rush had begun to become the idol of the American doctor.

In 1797 when the office of treasurer of the mint became open, Rush appealed to his friend, John Adams, for the appointment. Upon receiving it, he devoted his energies to his new duties, but it did not interfere with his practice of medicine nor the textbooks which he was constantly writing.

Rush's interest in the Pennsylvania Hospital stemmed from his teacher, Dr. John Redman. Rush's greatest service to the hospital lies in his treatment of the insane. He advocated good quarters, recreation, hot and cold baths and occupational therapy as well as excellent care. He devised the "tranquillizer" as a means of restraining the violent. His belief that the mentally ill should be treated as sick not as "possessed" is a modern view, and on this is based his title as "Father of American Psychiatry." Rush's book, *Medical Inquiries and Observations Upon the Disease of the Mind*, was published the year before he died. It was a comprehensive volume covering Rush's observations, made from years of experience, and his theories. It remained a standard textbook for doctors on the subject for many years. Although greatly out-moded today, it was a much needed pioneer in the field of psychiatry.

Rush was always interested in education. He wrote numerous pamphlets on the subject. In 1783, he helped to found Dickinson College and served on its board of trustees. He was always interested in Dickinson and helped to raise money for its progress.

Rush died on April 19, 1813 and was buried in Christ Churchyard along with six other signers of the Declaration of Independence.

In addition to the wall boards which were used to illustrate the life of Rush, there were a number of cases in which works of Rush were exhibited, including letters written by him. There were also large cases containing biographies and memorials of him, as well as writings contemporary to his time. The largest case, for example, contained the following:

[8] Goodman, *Benjamin Rush*, 217.

BIOGRAPHIES

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Farr, Clifford B. "Benjamin Rush and American Psychiatry," *American Journal of Psychiatry*, 1944, vol. 100, no. 6, pp. 2-15.

Flexner, James Thomas. Doctors on Horseback. x, 370 pp. New York, The Viking Press, 1937, pp. 57-117.

Good, Harry G. Benjamin Rush and His Service to American Education. Berne, Indiana, Witness Press, 1918. (Courtesy of West Nottingham Academy.)

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Ramsay, David, M. D. An Eulogium Upon Benjamin Rush, M. D. Philadelphia, Published by Bradford and Inskeep; New York, Inskeep and Bradford, James Maxwell, printer, 1813, viii, 139 pp.

Wilson, J. C. An Address Delivered at the Unveiling of a Monument Erected by the American Medical Association to the Memory of Benjamin Rush in Washington, D. C., June 11, 1904. [n. p.] J. B. Lippincott Co., 1904, 20 pp.

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American Museum, or Repository of Ancient and Modern Fugitive Pieces &c. Prose and Poetical. Volume IV, 1788 and Volume VII, 1790.

Carey, Mathew. A Short Account of the Malignant Fever, lately Prevalent in Philadelphia: with a statement of the proceedings that took place on the subject in different parts of the United States. Philadelphia, 4th ed., improved, published by the author, 1794.

Condie, Thomas and Folwell, Richard. History of the Pestilence, commonly called Yellow Fever, which almost desolated Philadelphia, in the months of August, September and October 1798. Philadelphia, R. Folwell, 1799.

Finley, Samuel. The Power of Gospel Ministers, and the Efficacy of their Ministrations, represented in a Sermon preached at Newark, before the Reverend Synod of New York, Sept. 26, 1754. N. Y., Printed by Hugh Gaine, 1755. (Courtesy of West Nottingham Academy.)

Letter of John Adams to Rush, July 23, 1806. *Photostat.* (Courtesy of West Nottingham Academy.)

Letter of Samuel Finley to Rev. Jacob Green, April 26, 1759. *Photostat.* (Courtesy of West Nottingham Academy.)

Porcupine, Peter. The Rush-Light, 15 February, 1800. New York.

A Report of an Action for Libel Brought by Dr. Benjamin Rush, against William Cobbett; in the Supreme Court of Pennsylvania, December term, 1799, for certain defamatory publications in a news-paper entitled *Porcupine's Gasette*, of which the said William Cobbett was editor. ‹Taken in Short Hand by T. Carpenter.› Philadelphia, W. W. Woodward, 1800.

Rush, Benjamin. "Address to the People of the United States," *American Museum*, vol. I, 1787, pp. 8-11. 3rd. ed., Mathew Carey, 1790.

Rush's Obituary entitled "Biographical Note of Dr. Rush" from *The Eclectic Repertory and Analytical Review*, vol. III, no. 3, pp. 515-522. Also in this volume: Rush. "Remarks upon the Hydrophobia," pp. 374-377.

"A Speech Delivered by Dr. Benjamin Rush, March 16, 1775, in Carpenter's Hall, before the subscribers towards a fund for establishing manufacturies of woolen, cotton and linen, in the City of Philadelphia," *American Museum*, vol. V, 1789, pp. 581-584.

Three lecture notebooks of a student; one was probably made from notes taken at Rush's lecture on *The Mind*, and the other two were probably made from lectures by Philip Syng Physick.

Transactions of the College of Physicians of Philadelphia, vol. I, part I. Philadelphia, T. Dobson, 1793.

ALSO

Drinker, Cecil K. Not So Long Ago. New York, Oxford University Press, 1937.

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Morton, Thomas G. The History of the Pennsylvania Hospital, 1751-1895. Philadelphia, Times Printing House, 1897.

[Rush, Benjamin]. William B. Reed of Chestnut Hill, Philadelphia: Expert in the Art of Exhumation of the Dead. Re-printed from the London Edition, 1867.

Storer, Horatio R. The Medals of Benjamin Rush, Obstetrician. Chicago, American Medical Association, 1889. (With this was shown a medal of Rush.)

In addition to the items listed above as loaned to the exhibit, the following articles were also lent and are greatly appreciated:

A photostat of Rush's will and numerous items not displayed which were of help in organizing the exhibit, through the courtesy of West Nottingham Academy for Boys.

A rare print of Dickinson College and several documents by Rush, through the courtesy of Dickinson College.

A facsimile edition of a letter by Rush was presented to the Institute by Franklin and Marshall College.

CHECK LIST OF RUSH'S WRITINGS *

COMPILED BY HELEN WHEELER

Medical Inquiries and Observations

Vol. I

1st ed. 206 pp. Phila., printed and sold by Prichard & Hall, 1789. (Laid in: Newspaper clipping—"Dr. Rush's watch badge of honor.")

1st ed. Copy 2. Bound (in paper) with Appendix containing the new method of inoculating for the small-pox . . . also, observations on the duties of a physician, and the methods of improving medicine. 2nd ed. with additions. 206, 39 pp. Phila., printed and sold by Prichard & Hall, 1789.

2nd American ed. 338 pp. Phila., printed by Thomas Dobson, 1794.

3rd ed. 261 pp. Phila., printed; London: reprinted for C. Dilly, 1794.

Vol. II

1st ed. iv, 321 pp. Phila., printed by T. Dobson, 1793.

A new edition. vii, 322 pp. Phila., printed by Thomas Dobson, 1797.

Vol. III

An Account of the bilious remitting yellow fever, as it appeared in the city of Philadelphia in the year 1793.

1st ed. ? x, 363 pp. Phila., printed by Thomas Dobson, 1794.

2nd ed. x, 363 pp. Phila., printed by Thomas Dobson, 1794.

German translation: Beschreibung des gelben Fiebers welches im Jahre 1793 in Phila. herschte . . . Aus dem englischen übersetzt und mit einigen Zusäzen begleitet von P. Fr. Hopfengärtner . . . und J. F. H. Autenrieth. xlviii, 472 pp., including folding tables. Tübingen, J. G. Cotta, 1796.

Vol. IV

Containing an account of the bilious remitting and intermitting yellow fever, as it appeared in Phila. in the year 1794. Together with an inquiry into the proximate cause of fever; and a defence of blood-letting as a remedy for certain diseases.

1st ed., xi, 258 pp. Phila., printed by Thomas Dobson, 1796.

Vol. V

Containing an account of the yellow fever as it appeared in Phila. in 1797, and observations upon the nature and cure of the gout, and hydrophobia.

1st ed., xii, 236 pp. Phila., printed by Budd and Bartram for Thomas Dobson, 1798.

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* The books in this check list are from the Henry Barton Jacobs Collection and the collections of the Institute of the History of Medicine and the William H. Welch Medical Library.

Medical Inquiries and Observations, in four vols.

2nd ed., revised and enlarged by the author. Phila., published by J. Conrad & Co., 1805.
Vol. I, x, 454 pp.
Vol. II, 455 pp.
Vol. III, 439, [437]-443 pp., An account, etc. . . .
Vol. IV, iv, 405 pp. [& index, 17 pp.]

3rd ed. revised and enlarged by the author. Phila., published by Benjamin & Thomas Kite, Mathew Carey, Hopkins & Earle, Johnson & Warner, Kimber & Conrad, Bradford & Inskeep, Thomas & William Bradford, Bennett & Walton, 1809.
Vol. I, iv, 456 pp.
Vol. II, 453 pp.
Vol. III, 443 pp.
Vol. IV, iv, 427 pp., [xix pp. index].

4th ed. 4 vols. in 2. Phila., printed for Johnson & Warner by Griggs & Dickinson, 1815.
Vols. I & II, viii, 264, 273 pp.
Vols. III & IV, 244, 249 pp. [index, x pp.].

5th ed. 4 vols. in 2.
Vol. I & II, vi, 264, 273 pp. Phila., printed for M. Carey & Son; B. Warner, A. Finley, S. W. Conrad, T. & W. Bradford, B. & T. Kite, and Bennett & Walton, 1818.
Vol. III & IV, 244, 249 pp. [x pp., index]. Phila., Anthony Finley, 1819.

Medical Inquiries and Observations upon the Diseases of the Mind.

1st ed. 367 pp. Phila., published by Kimber & Richardson, 1812. (Laid in one copy: Dr. Rush's epitaph for Commodore John Barry's tombstone. Newspaper clipping.)

2nd ed. 367 pp. Phila., published by John Richardson, 1818.

3rd ed. 365 pp. Phila., J. Grigg, 1827.

4th ed. 365 pp. Phila., John Grigg, 1830.

5th ed. 365 pp. Phila., published by Grigg & Elliot, 1835.

1770

A dissertation on the spasmodic asthma of children: in a letter to Dr. Millar. viii, 31 pp. London, printed for T. Cadell, and D. Wilson & G. Nicoll, in the Strand; and J. Johnson, Numb. 72, in St. Paul's Church Yard, 1770. [First published in Dec. 1769, probably in Phila.] Bound with Charleton, R., An inquiry into the efficacy of warm bathing in palsies. Oxford, 1770.

1773

Experiments and observations on the mineral waters of Phila., Abington, and Bristol, in the Province of Penna. Read June 18, 1773 before the American

Philosophical Society, held at Phila. 30 pp. Phila., printed by James Humphreys, junior, 1773.

An address to the inhabitants of the British settlements, on the slavery of the Negroes in America. 2nd ed., 28 pp. Phila., printed by John Dunlap, 1773.

A vindication of the address, to the inhabitants of the British settlements on the slavery of the Negroes in America. . . . (By a Pennsylvanian.) 54 pp. Phila., printed by John Dunlap, 1773.

1777

Directions for preserving the health of soldiers, addressed to the officers of the army of the United States. *Photostat* from Pennsylvania Packet No. 284. 14 pp. Phila., 1777.

Observations upon the present government of Pennsylvania, in four letters to the people of Pennsylvania. *Photostat*. 24 pp. Phila., printed and sold by Styner and Cist, 1777.

1781

The new method of inoculating for the smallpox. *Photostat*. 28 pp. Phila., Charles Cist, 1781.

1784

Considerations upon the present test-law of Pennsylvania, addressed to the legislature and freemen of the state. *Photostat*. 23 pp. Phila., printed by Hall and Sellers, 1784.

1786

An enquiry into the influence of physical causes upon the moral faculty. 40 pp. Phila., printed by Charles Cist, 1786.

The same. 4, 28 pp. Phila., Haswell, Barrington & Haswell, 1839.

A plan for the establishment of public schools and the diffusion of knowledge in Pennsylvania; to which are added thoughts upon the mode of education, proper in a republic, addressed to the legislature and citizens of the state. *Photostat*. 36 pp. Phila., printed for Thomas Dobson, 1786.

1787

A discourse delivered before the College of Physicians of Phila. Feb. 6, 1787. On the objects of their institution. Printed for the Trans. of the College of Physicians. [n. p.], 1787. *In*: College of Physicians of Phila. A record for the commemoration of the 150th anniversary . . . 1937, 30 pp., pp. 5-10.

Thoughts upon female education, accommodated to the present state of society, manners, and government, in the United States of America, addressed to the visitors of the Young Ladies' Academy in Philadelphia, 28 July, 1787, at the close of the quarterly examination. To which is added, a prayer by Samuel Magaw. *Photostat*. 25 pp. Phila., printed by Prichard & Hall, 1787.

A letter by Dr. Benjamin Rush, describing the consecration of the German College at Lancaster, in June, 1787. Printed, with an introduction and notes, from

a newly discovered manuscript, now in the Fackenthal Library, at Franklin and Marshall College. Lancaster, Pennsylvania, published by order of the College, 1945.

1789

An account of the manners of the German inhabitants of Penna. Written 1789 . . . Notes added by Prof. I. Daniel Rupp. 72 pp. with portrait of Rupp. Phila., published by Samuel P. Town, 1875.

1790

An eulogium in honor of the late Dr. William Cullen. Delivered before the College of Physicians of Phila. on the 9th of July . . . 1790. 30 pp. Phila., published by order of the College of Physicians by Thos. Dobson, 1790.

1792

An account of the sugar maple-tree of the United States. Read in the American Philosophical Society on the 19, of August, 1791, and extracted from the third Volume of the Transactions now in the press. 16 pp. Phila., printed by R. Aitken & Son, for a Society of Gentlemen, 1792.

Considerations on the injustice and impolicy of punishing murder by death. Extracted from the American Museum, with additions. 19 pp., Phila., Press of Mathew Carey. 1792.

1793

On the punishment of murder by death. *Photostat*. 20 pp. Phila., printed: London reprinted, J. Johnson & J. Phillips, 1793.

An account of the causes and indications of longevity and of the state of the body and mind in old age; with observations on its diseases, and their remedies. ⟨First printed at Phila. An. 1793.⟩ 12 pp. (No title page. Advertisements of life insurance in footnotes.)

1796

An eulogium, intended to perpetuate the memory of David Rittenhouse, . . . late President of the American Philosophical Society. Delivered before the Society December 17, 1796. 46 pp. Phila., J. Ormrod [n. d.]

1798

Essays, literary, moral and philosophical. 378 pp. Phila., printed by Thomas & Samuel F. Bradford, 1798.

The same. 2nd ed. with additions, 364 pp. Phila., printed by Thomas & William Bradford, 1806.

Proofs of the origin of the yellow fever in Phila. & Kensington, in the year 1797 . . . in 2 letters, addressed to the Governor of the Commonwealth of Penna., by the Academy of Medicine of Phila. 49 pp. Phila., printed by Thomas & Samuel F. Bradford, 1798.

1799

Observations upon the origin of the malignant bilious, or yellow fever in Phila. and upon the means of preventing it. 28 pp. Phila., printed for Thos. Dobson by Budd & Bartram, 1799.

Three lectures upon animal life delivered in the University of Pennsylvania. Published at the request of his pupils. viii, 84 pp. Phila., printed for Thomas Dobson by Budd and Bartram, 1799.

1800

A report of an action for a libel, brought by Dr. Benjamin Rush, against William Cobbett, . . . 1799. A_3-$F_{[1]}$, Aa-Dd_4. Phila., printed by W. W. Woodward, 1800.

1801

Six introductory lectures to courses of lectures, upon the institutes and practice of medicine, delivered in the University of Pennsylvania. 168 pp. Phila., published by J. Conrad, 1801.

An account of the life and character of Christopher Ludwick . . . baker-general of the army of the U. S. during the Revolutionary War. First published in the year 1801. Revised and republished by direction of The Phila. Society for the establishment and support of charity schools. To which is added, An account of the origin, progress, and present condition of the institution. 61 pp. Phila., printed for the Society by Garden & Thompson, 1831, pp. 5-31.

1805

Valedictory charge, delivered to the graduates in medicine, at the commencement, held June 5th, 1805, in the University of Pennsylvania. *In* Phila. Medical and Physical Journal, vol. 2, part 1, Phila., J. Conrad & Co., 1805, pp. 131-135.

The same, bound separately.

An inquiry into the various sources of the usual forms of summer and autumnal disease in the United States, and the means of preventing them. To which are added, Facts, intended to prove the yellow fever not to be contagious. 113 pp. Phila., published by J. Conrad & Co., printed by T. & G. Palmer, 1805.

1811

Sixteen introductory lectures, to courses of lectures upon the institutes and practice of medicine, with a syllabus of the latter. To which are added, two lectures upon the pleasures of the senses and of the mind, with an inquiry into their proximate cause. Delivered in the University of Pennsylvania. viii, 455 pp. Phila., published by Bradford and Innskeep. Fry and Kammerer, printers, 1811.

An inquiry into the effects of ardent spirits upon the human body and mind. 4th ed. with additions. 50 pp. Phila., printed for Thomas Dobson by Archibald Bartram, [n. d.]

The same. 6th ed. with addition, 32 pp. New York, printed for Cornelius Davis, 1811.

The same. 7th ed. with additions, 36 pp. Boston, printed by Manning & Loring, 1812.

The same. 8th ed., Brookfield, 1814, reprinted in Henderson, Yandell: A new deal in liquor, a plea for dilution. 239 pp. Garden City, N. Y., Doubleday, Doran & Co., 1934 pp. 183-221.

Books Annotated by Rush.

Cleghorn, George, M. D. Observations on the epidemical diseases of Minorca. From the year 1744 to 1749. . . . With notes by Benjamin Rush, M. D. Phila., printed for F. Nichols, Fry & Kammerer, printers, 1809.

The same. 2nd Amer. ed. Phila., printed for F. Nichols, William Fry, printer, 1812.

Hillary, William. Observations on the changes of the air, and the concomitant epidemical diseases in the island of Barbadoes to which is added, a treatise on the putrid bilious fever, commonly called the yellow fever. . . . With notes by Benjamin Rush, M. D. Phila., published by B. T. Kite, Jane Aitken, printer, 1811.

Pringle, Sir John, Bart. Observations on the diseases of the army. First American edition. With notes by Benjamin Rush, M. D. Phila., published by Edward Earle, also by D. Mallory & Co., Boston; P. H. Nicklin & Co., Baltimore; and J. W. Campbell, Fry & Kammerer, printers, Petersburgh, 1810.

The same. Phila., published by Anthony Finley, Medical Bookseller. Fry & Kammerer, printers, 1812. (The title page is torn with the title incomplete in this book.)

The Works of Thomas Sydenham, M. D., on acute and chronic diseases; with their histories and modes of cure. With notes . . . by Benjamin Rush, M. D. Phila., published by Benjamin Thomas Kite, 1809.

NOTES AND COMMENTS

A FOURTH CENTURY A. D. REFERENCE TO ANESTHESIA

M. F. ASHLEY MONTAGU

What is possibly the earliest reference in our era to anesthesia has failed to find its way into the historical accounts of man's attempts to overcome pain. It is therefore recorded here.

The passage occurs in the treatise *De Trinitate* written by St. Hilary of Poitiers.

St. Hilary was born about the year 300 A. D., in 350 A. D. he was consecrated Bishop of Poitiers, and in 367 A. D. he died. His interests appear to have been mainly theological, and there is no reason to believe that he took any special interest in the medicine of his time. This suggests that his description of the anesthetic effects of certain drugs was fairly common knowledge in his day.

The section which follows is from Book 10, Sect. 14, p. 185, of *On the Trinity* (*De Trinitate*) by St. Hilary of Poitiers, in the English translation by E. W. Watson.[1]

> " The nature of our bodies is such, that when endued with life and feeling by conjunction with a sentient soul, they become something more than inert, insensate matter. They feel when touched, suffer when pricked, shiver with cold, feel pleasure in warmth, waste with hunger and grow fat with food. By a certain transfusion of the soul, which supports and penetrates them, they feel pleasure or pain according to the surrounding circumstances. Where the body is pricked or pierced, it is the soul which pervades it that is conscious, and suffers pain. For instance a flesh wound is felt even to the bone, while the fingers feel nothing when we cut the nails which protrude from the flesh. And if through some disease a limb becomes withered, it loses the feeling of living flesh: it can be cut or burnt, it feels no pain whatever, because the soul is no longer mingled with it.

[1] *A Select Library of Nicene and Post-Nicene Fathers of the Christian Church.* Second Series (Edited by Philip Schaff and Henry Wace), New York, The Christian Literature Company, 1899.

Also when through some grave necessity part of the body must be cut away, the soul can be lulled to sleep by drugs, which overcome the pain and produce in the mind a death-like forgetfulness of its power of sense. Then limbs can be cut off without pain: the flesh is dead to all feeling, and does not heed the deep thrust of the knife, because the soul within it is asleep."

MEDICO-HISTORICAL NEWS AND ACTIVITIES

A WELCOME TO THE *JOURNAL OF THE HISTORY OF MEDICINE AND ALLIED SCIENCES*

When a child is born the world rejoices. And when a child is born after years of death and destruction, the creation of new life appears like a miracle, like a great promise, and the joy we feel over it is the deeper.

We the editors of the *Bulletin of the History of Medicine* began to feel alone. When the war broke out the European colleagues dropped out one after another. The Swedes carried on valiantly with *Lychnos*. The Swiss founded a new journal, *Gesnerus*, at the height of the cataclysm. But for a number of years we were cut off from continental Europe entirely and when the *Annals of Medical History* suspended publication we felt as if we had been left alone.

We did the best we could against great odds. Paper was short and labor still shorter, but we managed to publish the same amount of text on less paper. We came out with delays, sometimes two and even three months late, but every number was published ultimately and throughout the war medical history had an organ in the English-speaking world. In 1943 we even were able to add a series of *Supplements* to the Bulletin of which five have been published so far while five more are in preparation.

We always hoped that our " splendid isolation " would not last too long, and we never missed an opportunity to stress the need for other periodicals.[1] It is therefore an immense satisfaction to be able to extend today a most cordial welcome to the *Journal of the History of Medicine and Allied Sciences*, to wish it success that it may become a rich source of inspiration, and to assure it of our readiness to cooperate with it at any time.

Good journals always reflect the personalities of some individuals or of a group. These are the driving forces that give life and color to a journal. When a periodical is " de-personalized " it soon becomes a mere deposit of papers. *Medical Life* was Victor Robinson and reflected his wide range of interests. The *Annals of Medical History* was the creation primarily of two men, Paul B. Hoeber, the publisher, who did so much to promote interest in medical history, and Francis R. Packard who edited the *Annals* from the first number issued in 1917 to the last in 1942. When

[1] See *Bull. Hist. Med.*, 1942, 12: 432; 1943, 14: 241.

the journal was launched Osler, Cushing, Klebs, Garrison, Riesman, Howard, Kelly, Jacobi, Pepper, Streeter, a whole generation of American doctors was at work, who actively contributed to medical history. The *Annals* reflected the attitude of that group toward the past of medicine. The *Bulletin of the History of Medicine* was founded in 1933 as the organ of the new Johns Hopkins Institute of the History of Medicine and was later extended to become the organ of the American Association of the History of Medicine.

In the meantime a new generation has grown up in medical history and a new publisher has entered the field. Henry Schuman who is bringing out the new journal has made many friends. His publication program reveals imagination, courage, and always excellent taste. A book-lover himself with a fine sense for craftsmanship, he has produced good and beautiful books such as Harvey Cushing's *Bio-Bibliography of Vesalius* and many others. It was to be expected that he would give the new journal a most attractive appearance. Henry Schuman certainly deserves the full support of all of us.

George Rosen, the editor of the Journal, is well known to the readers of this *Bulletin* to which he has contributed a number of excellent papers. Physician, public health man, historian and sociologist, he is undoubtedly one of the most able medical historians of the younger generation. To him as to us medical history is not an antiquarian subject but a live force, and his editorial to the first number of the Journal, *What Is Past, Is Prologue*, is an eloquent testimony of his progressive attitude. A man of tremendous working capacity who even during the war while he was in uniform always found time for research and writing, he is the author of a number of books and many papers, and as editor of the *Ciba Symposia* for many years he had ample opportunity to demonstrate his editorial ability.

Dr. Rosen is aided by an Editorial Board comprising Erwin H. Ackerknecht, formerly of the Johns Hopkins Institute of the History of Medicine, now of the American Museum of Natural History, Max H. Fisch of the Army Medical Library Cleveland Branch, John F. Fulton of Yale and Josiah C. Trent of the University of Michigan.

The Journal, moreover, can boast of a large staff of Consulting Editors from all sections of the United States and from twenty foreign countries. This will undoubtedly give it a most welcome international note that is much needed at a time when we are facing the task of restoring international cultural relations. As long as the *Bulletin* was alone or almost so, it was so flooded with manuscripts that it could publish only studies that came from the English-speaking world, and being the official organ of two

institutions it obviously gave preference to studies written by members of these institutions. An international organ is much needed, however, and as a matter of fact one of us recommended the foundation of just such an organ to the International Society of the History of Medicine at a meeting of its Council, in Zagreb, in 1938.[2] The recommendation was made more for the record than for action, because it was quite obvious that such a plan could not be realized on the eve of a world war. But now, sooner or later, we shall have to revive the Society and to consider resuming our international conventions. In this process the Journal will have a very important part to play.

It is easily apparent from all that has been said that *Bulletin* and *Journal* do not compete with each other but on the contrary supplement one another in the happiest way. Together they will endeavor to promote and develop research and interest in the history of medicine. And the friendship that has united the editors of both periodicals and Henry Schuman for many years is the best guarantee for a close cooperation.

HENRY E. SIGERIST
GENEVIEVE MILLER

[2] *Archives de la Société Internationale d'Histoire de la Médecine*, 1938, No. 4.

ANNOUNCEMENTS

AMERICAN ASSOCIATION OF THE HISTORY OF MEDICINE

Plans are being made for the first post-war Annual Meeting of the Association, scheduled to be held at Atlantic City on May 26-27, 1946. Further details will appear in later issues of the *Bulletin*. The president, Dr. E. B. Krumbhaar, requests that members who wish to present a paper communicate *before April 1, 1946* with the secretary, W. B. McDaniel, 2d, College of Physicians of Philadelphia, 19 S. 22d St., Philadelphia 3, Pa., stating the subject and the approximate time required for delivery.

We are not publishing a list of members of the Association this year since many of our members are just returning from the armed forces and their addresses are uncertain. Changes in membership will be reported in the July number of 1946, and a full list of members brought up to date will appear in the January 1947 issue.

CONSTITUENT SOCIETIES

The New York Society for Medical History

The New York Society for Medical History held its second meeting of the Fall on November 1, 1945 at Squibb Hall in New York City. Papers were delivered by Drs. C. P. Oberndorf and A. A. Brill in a meeting devoted to a consideration of the literary and historical contributions of the late Dr. Smith Ely Jelliffe. Dr. Gregory Zilboorg, president of the New York Society, was in the chair.

The passing of Smith Ely Jelliffe left a noticeable void among the gifted and outstanding leaders of neuropsychiatry. Dr. Zilboorg, in his preliminary remarks, referred to Dr. Jelliffe's death as ". . . the loss of a unique figure . . . a truly cultured representative of New York . . . gentle and casual as long as he was silent but sharp and witty as soon as he began to speak . . . the 'Rabelais' of neuropsychiatry . . . ." The papers of the evening were of unusual interest in that in both instances the accounts given were highly personalized and abounded in stories and anecdotes culled from long association with Dr. Jelliffe. Dr. Oberndorf discussed the literary and historical contributions in three categories—1) Stories of journeys abroad—the interesting accounts of the "Wanderjahren" recorded in "Glimpses of a Freudian Odyssey," 2) Papers dealing with purely historical aspects of neuropsychiatry, writings which revealed profound classical knowledge and historical perspective, and lastly 3) those papers dealing with the psychiatric interpretation of literature, written in a graphic pungent style and with all the facility and artistry of a man of letters.

Dr. Brill, whose intimate association with Dr. Jelliffe dated back to 1908, presented a biographical sketch and discussed Dr. Jelliffe's writings from their early beginnings ("A List Of Plants in Prospect Park."—1890) to his most recent contributions to clinical psychiatry. In 1903, following his earlier writings on botany and pharmacology he developed an ever expanding interest in mental medicine. Dr. Jelliffe wrote extensively on various neurologic and psychiatric

disorders, introduced the concept of paleo-psychology, and along with William Allan White started the Nervous and Mental Disease Monograph Series. In 1913 he founded the "Psychoanalytic Review" and entered upon what Dr. Brill characterized as the 'Psychoanalytic' period of his writings. In addition to his studies in psychoanalysis his important and pioneer efforts in psychosomatic medicine were reviewed. Both speakers afforded the audience many interesting personal glimpses into the settings both recent and past in which Dr. Jelliffe lived and worked. An original thinker, an outspoken exponent of what he believed, he was epitomized by Dr. Zilboorg in his closing remarks as "one who began as an eminent Victorian of the United States . . . one who in the manner of Rabelais remained in the faith but graciously violated every canon. . . ."

NATIONAL NEWS

The following letter from Dr. George Urdang, Director of the American Institute of the History of Pharmacy, Madison, Wis. was published in a recent issue of *Science*:

"Among the bronze monuments melted down for conversion into weapons in the countries overrun and occupied by the Nazis in World War II was the statute of the pharmacists, Pelletier and Caventou, the discoverers of quinine, erected in Paris in 1900 and paid for by contributions from all parts of the world.

"It would be an excellent manifestation of good will if American scientists, if the American people, would replace the destroyed statue by another and more beautiful one. The new monument would stand not only as a renewed tribute to a scientific deed of highest value to the human race but simultaneously as a symbol of the victory of humanity over brutality.

"If this suggestion meets with general approval, a committee should be formed to deal with the questions concerned (collection of necessary funds, communication with the Société de Pharmacie de Paris, the American and French authorities, etc.).

"The undersigned would be only too glad to aid in the realization of this project to the best of his ability.

GEORGE URDANG."

Army Medical Library

The *Army Medical Library News* reports that the Library has recently obtained a manuscript report prepared by Dr. John Shaw Billings in 1864. Two years previously the U. S. Government had settled a number of freed slaves on the Isle à Vache, a small island off the southern coast of Haiti. An epidemic of smallpox broke out among the colonists and resulted in a terrific mortality. Conditions became so bad that the Haitian government would no longer permit the negroes to stay on the island, and President Lincoln sent an expedition to return the survivors to the United States. Dr. Billings, then only 25 years old and a medical officer in the Union Army, was selected to be medical officer of the expedition. His report is dated March 20, 1864, the day the ship carrying the negroes reached Alexandria, Va.

New Jersey

A Department of the History of Medicine has been established at Essex College of Medicine and Surgery, Newark, N. J. Dr. Hyman I. Goldstein was appointed Professor of the History of Medicine and Head of the Department. His introductory lecture, "Medical Education in New Jersey, and Some Medical Men," will be held on February 15 or 22, 1946, to which the faculty, student body, and Essex County physicians are invited.

NEWS FROM ABROAD

Belgium

Dr. René Sand, internationally known expert in the field of social medicine and well known to American physicians for his original book *Health and Human Progress, An Essay in Sociological Medicine*, was deposed by the Germans in 1940 when they invaded Belgium and he spent the last 8 months of the war in a concentration camp. He is back in Brussels and has resumed his work as Technical Counselor of the Belgium Ministry of Health. He has, in addition, been appointed Professor of Social Medicine on the Medical Faculty of the University of Brussels, thus holding a chair which was especially created for him. He gives a 30 hour course that is compulsory for every student of medicine. Twelve hours of the course are devoted to the history of medicine.

Mexico

An ONA—telegram from Mexico City published in the *New York Times* of January 13, 1946 announces that the Pro Martin Institute of the Cross and Juan Badiano Society in Mexico is organizing a campaign to raise $20,000 for the publication of the Badianus Manuscript with translations into Spanish and English. It is the manuscript of a beautifully illustrated Aztec herbal of 1552 which is preserved in the Vatican Library.

In 1940 the Johns Hopkins Press published a facsimile of this manuscript that is technically so good that it would be very difficult to improve on it. The book, moreover, contains a very competent introductory study on the herbal and its author, transcription of the Latin text, translation into English, commentary and footnotes, this all by Emily Walcott Emmart who devoted many years to the task. The publication was heavily subsidized by various organizations and this made it possible to offer the book to the public at the very low price of $7.50. It seems wasteful to do the whole work over again for an edition the only new feature of which will be a Spanish translation.

Scotland

The University Court of Edinburgh University recently appointed Dr. Douglas Guthrie to be Lecturer on the History of Medicine, in succession to the late Dr. J. D. Comrie who died in 1939. He will give his first lecture in January, 1946 on "The Search for a Philosophy of Medicine."

Dr. Guthrie's recent book *A History of Medicine* (London, Edward G. Allen & Son, 1945) has just had its second printing, and there is a possibility that an American edition will be issued.

U. S. S. R.

A letter was recently received from Prof. D. M. Rossiisky, Chairman of the History of Medicine Club at the First Moscow Medical Institute which describes the activities of the Club:

The History of Medicine Club was organized at the First Moscow Medical Institute in 1944. It studies the history of the development of medical subjects and the individual roles played by Russian and foreign scientists, paying attention to the development of Russian medicine. In 1944 the lectures were devoted to the history of the development of Russian medicine in the 17th, 18th and 19th centuries. A special conference was held on the occasion of the bicentenary of the birth of the famous Russian obstetrician, N. M. Ambodik, and the centenary of the birth of the eminent Russian clinician, Prof. A. A. Ostroumov, one of the founders of the Russian school of internal medicine.

Professor D. M. Rossiisky, Chairman of the History of Medicine Club, has collected bibliographic material on the history of Russian medicine during the last 150 years and has compiled a "Bibliographical Index on the History of Russian Medicine from 1783 to 1945."

The Club held lectures for the students of the First Moscow Medical Institute on the outstanding medical men of the Institute, which is the oldest medical school in the U. S. S. R. At these lectures the students heard about the lives and work of such famous Russian physicians as Sechenov, Zakharin, Botkin, Ostroumov, Pirogov, Kozhevnikov, Korsakov, Snegirev and others.

Students of the Institute likewise participate in the activities of the Club. Thus, M. P. Kalashnikova, a senior course student, read two interesting papers at recent scientific conferences: one on the "History of the Development of the First Medical Schools in Russia" and the other on "Pirogov's Student Years."

At the present time, under the leadership of the Club, the students of the First Moscow Medical Institute are investigating the role and significance of the Institute in the origin and development of the science of endocrinology in Russia.

The Institute of the History of Medicine at the Johns Hopkins University is exchanging publications with the First Moscow Medical Institute.

Editors' Note

During the year 1946 Volumes 19 and 20 of this Bulletin will be published. The Editors take pleasure in announcing that an Index of Volumes 1 to 20 is in preparation that will be sent to members of the Association and other subscribers early in 1947.

BOOK REVIEWS

JOHN P. ARCIERI. *The Circulation of the Blood and Andrea Cesalpino of Arezzo.* New York: S. R. Vanni, 1945. 193 pp. illustrated. $4.00.

The historian dreads nationalist controversy like the plague. Who, looking on a world in ruins, can doubt it to be the most deadly of the infectious diseases. Tuberculosis and syphilis, pneumonia and malaria, are trifles by comparison. It slays and maims far more than all of them together. Yet, since it is the pandemic of our time, it is the duty of the historian to do what little he can to allay its symptoms. Though cure is beyond him, he may perhaps apply an emollient here, an analgesic there, and occasionally recommend a diaphoretic. Dr. Arcieri has long laboured under the nationalist fever. During the exacerbations of his affliction he has the strange delusion that the vast indebtedness of civilisation to Italy has not been recognised. In a passionate work he now denounces an imaginary conspiracy of several British and American scholars to belittle the achievements of his distinguished fellow-countryman, Andrea Cesalpino. That this diaphoresis will have relieved his symptoms is, we believe, the hope of all those he attacks.

Dr. Arcieri would prove that the powers of Harvey have been exaggerated and those of Cesalpino underestimated. With both his theses, though not with his manners, the reviewer is in some limited sympathy. But even were Dr. Arcieri's claims all fully justified—which they are not—they would still have nothing to do with Harvey's achievement which is a superb experimental demonstration of a basic physiological truth. Harvey was a man of one very great work. Cesalpino diffused remarkable powers in many directions. But however we place Harvey intellectually, all that we know of him reveals a personality of the utmost integrity. He was modest and reticent in his bearing; he was revered by his colleagues and contemporaries; he had no serious enemies; even his scientific and political opponents treated him with deference and respect. That Dr. Arcieri should choose to defame such a man betrays only too clearly the deadly nature of his nationalist infection. The spiritual sanitarians of the U. S. A. can be trusted to see that it does not spread.

As for estimates of Cesalpino. It is true that most historians of medicine have laid little emphasis on his writings. In other departments his merits are well recognised. It would, for example, be impossible to write the history of mineralogy without giving an important place to him and to his short-lived pupil Mercati. Lancisi, a Maecenas of science, has seen well to that. In botanical history Cesalpino has an honoured niche, for his were the first effective classificatory methods. They passed through Jung and Bauhin to Ray. Historians of chemistry recognise his worth and Hoefer in particular has discussed his position.

To turn to Cesalpino's relation to the discovery of the circulation. Dr. Arcieri opens with a history of the idea that the blood circulates. He omits the discovery of recent years that the Arabs, through ibn al-Nafis, had the conception in the 13th century. The point is of importance here because on it depends the interpretation of the term "discovery." It has never been doubted that Cesalpino "had the idea" of the circulation. So had Aristarchus the idea of a sun-centred earth, Buffon of

evolution and Lucretius of atoms. But these achievements are of quite a different order (though not necessarily of an inferior order) to those of Copernicus, Darwin and Dalton. In the matter of the circulation the situation is somewhat similar. Cesalpino's great ability naturally produced valuable suggestions on any subject to which he gave his mind. The reviewer finds it very difficult to follow Dr. Arcieri's account of what Cesalpino has said, but it has always been recognised that there are passages in Cesalpino's writings which suggest an inkling of the circulation. Unfortunately it has also been recognised that there are other passages which seem inconsistent with any such view. The matter has been gone over and over *ad nauseam* and the fact seems to be that Cesalpino was not always clear on the matter in his own mind. Few of us are willing to cover the ground again, for to read Cesalpino's gaseous and difficult volumes from cover to cover is a very serious and, on the whole, unprofitable and unpleasant undertaking. Dr. Arcieri has put together, however, a number of fairly striking passages. He does not make evident, to the reviewer at least, to what extent these passages are continuous. Moreover he fails to meet the fundamental point that Cesalpino records no experiments. Harvey's work is essentially an experimental demonstration, not a philosophical disquisition. Cesalpino's passages on the circulation are essentially philosophical disquisitions, not experimental demonstrations. We fully agree that Cesalpino was a better philosopher than Harvey but we do not think that high praise. Better things can be said of Cesalpino.

Now for the emollient for Dr. Arcieri's abraded nationalist sores. We will present him with an Italian inkling of the capillary system nearly a century before Harvey and long before Cesalpino. In 1536 Nicola Massa of Venice, then an elderly man who had been dissecting since before the birth of the Belgian intruder Vesalius, published his excellent *Anatomiae, Liber introductorius*. In it he has the following passage.

"The vena cava divides in the substance of the liver into many branches on its upper surface (*gibbosae partes*) but you will note that toward the fissure the divisions become minute. These minute branches are in fact united with branches of the portal vein. You will see this better if you remove the liver, macerate it for some days, and then boil it in water till the flesh is completely solid (*ad perfectam coctionem*). You can then separate the more easily the flesh from the veins. You will then see that the substance of the two veins is woven into the form of a network."

We should not be surprised if Dr. Arcieri discovers something of the same kind in the works of another Italian practitioner, Galen. Yet neither of these admirable anatomists can be said to have "discovered" the capillary circulation. That, as all know, was the achievement of a third Italian, Marcello Malpighi. As a peaceful gesture the reviewer undertakes to say nothing against Malpighi if Dr. Arcieri can bring himself to be silent as to the iniquities of Harvey. He thinks, however, Dr. Arcieri's points in connexion with Cesalpino would have been made better and more intelligibly in a short article in the columns of this journal than in a long polemic, the friction of which is more calculated to generate heat than light.

An old and good definition of science is "Discourse of those judgments on which universal assent is attainable." Universality is of the very essence of science. How

worse than futile, then, to seek to introduce the devil of national animosities into the pure universal atmosphere in which alone the spirit of science can survive.

> "Foul devil, for God's sake hence: and trouble us not;
> For thou hast made the happy earth thy hell,
> Filled it with cursing cries and deep exclaims
> Behold this pattern of thy butcheries."

CHARLES SINGER.

Pharmacopoeia Londinensis of 1618. Reproduced in Facsimile, with a Historical Introduction by GEORGE URDANG. Hollister Pharmaceutical Library Number Two. Madison: State Historical Society of Wisconsin, 1944. vii + 299 pp. 2 illustrations. $12.00.

In 1914 Mr. Albert Henry Hollister, a druggist of Madison, Wis., and his wife willed a sum of money to the Wisconsin Historical Society which was to be called the Hollister Pharmaceutical Fund, half the income of which was to be used to establish a collection of pharmaceutical literature. As an excellent pharmaceutical library already existed in the same city, the executor of the Hollister will agreed to use the fund for reprinting "rare and valuable works in the field of pharmaceutical history and development."

The first such publication to appear was a facsimile of the *Pharmacopoeia Augustana* of 1564 which was issued in 1927 by the late Dr. Edward Kremers, who did so much to promote studies in the history of pharmacy in this country. Now a second splendid facsimile edition of an extremely rare pharmacopoeia has been brought out by Dr. George Urdang, the Director of the American Institute of the History of Pharmacy at Madison.

The *Pharmacopoeia Londinensis*, first published in 1618, has long provided one of the greatest puzzles in the history of pharmacy. First issued in May, 1618, it was quickly recalled and only a few copies have survived. A second issue appeared in December of the same year. Why was the first recalled? Dr. Urdang in an extremely able and scholarly analysis explains the differences between the cancelled edition and that which was finally distributed. Outside of the typographical errors in the first issue which were used by the original committee members of the Royal College of Physicians to explain the recall and republication of the book, Dr. Urdang points out essential differences in the arrangement and contents which would indicate that a question of principle rather than of printing was involved. While the May issue contained a selected number of simples which were to serve as the standard stock of a pharmacy and a limited number of formulas for compound remedies designed to give some uniformity to pharmaceutical practice, the December issue included nearly all drugs in common use at the time and many more formulas. The first contained few definitions, explanations or synonyms, while the second gave detailed discussions, so that the book thus became a sort of textbook for the untrained as well as trained pharmacist. Dr. Urdang is the first to point out these basic differences, and he conjectures that the change in principle must have arisen among a younger group in the Royal College of Physicians who objected to the

simplicity and lack of austentatiousness of the first issue. Whether this is true or not cannot be judged from the internal evidence of the pharmacopoeias. Perhaps one day a study of the contemporary literature may bring to light additional information that would confirm Dr. Urdang's supposition. But his painstaking analysis of the two 1618 issues of the *Pharmacopoeia Londinensis* gives the modern reader of the Pharmacopoeia a great deal in addition. He lists, for example, and explains the various simples mentioned in both issues; he identifies the various physicians or places whose names are attached to certain formulas; he discusses the new chemical remedies which had only appeared during the past century.

The facsimile of the May, 1618, issue of the *Pharmacopoeia Londinensis* is admirably reproduced, so that this publication combines two genuine contributions to the history of pharmacy: a beautiful reproduction of an extremely rare book which will be valued by book connoisseurs, and a critical study on a most interesting phase in the history of pharmacy.

GENEVIEVE MILLER.

RALPH H. MAJOR, ed. *Classic Descriptions of Disease*. Third Edition, Springfield, Ill.: Charles C. Thomas, 1945. 679 pp. $6.50.

When a book on medical history appears in its third edition, there can be little doubt of its popularity, and in the case of Dr. Major's anthology this popularity is richly deserved. To review a book which is already well-known may seem redundant, yet in this case there is some justification. The present edition of *Classic Descriptions of Disease* has been revised and considerably augmented by the inclusion of some eighteen new selections. These include Nathaniel Hodges on bubonic plague, Josiah C. Nolt on yellow fever, Francis Home on diphtheria, Tobias Cober on typhus fever, P. C. A. Louis on typhoid, the descriptions by Vieusseux and Elisha North of epidemic cerebrospinal meningitis, the classic picture of mumps as given by Hippocrates, J. C. Da Costa on aortic stenosis, Jacques de Vitry and Jean de Joinville on scurvy, and a description of sprue by Aretaeus the Cappadocian. In addition the section on endocarditis has been considerably expanded, so that to the selection by Samuel Wilks which appeared in the second edition there have now been added passages by Lazarus Riverius, Morgagni, Bouilland, Virchow, W. S. Kirkes and E. F. H. Winge.

Despite these additions, however, the book has only 679 pages as compared to 727 in the second edition. This saving is undoubtedly due to economy of space and material.

GEORGE ROSEN.

GEORGE ROSEN. *The Specialization of Medicine with Particular Reference to Ophthalmology*. New York, Froben Press, 1944. 94 pp. $2.00.

Dr. Rosen, a doctor of medicine who desired to broaden his education through studies in the political and social sciences, prepared this study as a doctoral dissertation in Political Science at Columbia University. It is an excellent historical

and sociological analysis of the several factors which were instrumental in creating modern specialization in medicine. The author has chosen ophthalmology as the subject of his investigations, analyzing chiefly the forces behind its appearance in America, and more particularly in New York City.

After pointing out that specialization existed in antiquity, Dr. Rosen brings a lengthy chapter on its existence among various primitive tribes, from which he concludes that "the process of specialization in the medical field even in its rudest forms already involves some degree of scientific, technologic, and social differentiation."

Modern specialization appeared as the result of developments from two sides, the scientific-technological and the social side. It was not until science formulated a theory of disease wherein specific disease entities were recognized to affect particular organs of the body that specialization as we know it today could arise. The new pathological-anatomical concepts which began in the 18th century localized the seat of various diseases and directed studies towards a particular organ or group of organs. This led to the development of new instruments for observing the diseased part, which in turn increased knowledge on the subject to such an extent that specialization became inevitable.

From the social side, the phenomenon of urbanization is, according to Dr. Rosen, largely responsible for the opportunities for such specialized studies. In cities hospitals were founded which facilitated observation of disease, bad living conditions produced disease in large numbers of the population which in turn served as clinical material. The large city, moreover, provided facilities for cultural intercourse and exchange of ideas, and the last, but not the least important benefit of cities was that they supplied the economic basis to support the doctors.

Inevitably every new phenomenon meets with opposition, and if the social climate is too unfavorable, it may never be accepted. Practising ophthalmologists in the early 19th century were viewed with suspicion at first, because previous specialists on the eyes had nearly all been quacks. Formerly regular practitioners and surgeons would not touch eye diseases because they knew very little about them, and people suffering from such complaints must necessarily resort to itinerant quacks or anyone who claimed to be able to help them. As specialization developed, however, a more serious objection arose within the medical profession which was based chiefly on economic grounds, i. e. the ability of specialists to demand higher fees. Others, too, felt that medicine should be a unity, and that it was wrong to concentrate almost exclusively on certain parts of the body.

Dr. Rosen's final chapter points out the problems facing medical specialization today: the disturbance of the patient-physician relationship, the depersonalization which frequently results, the economic difficulties involved in the necessarily high fees, and the bad distribution of specialists both geographically and medically. The tendency is for physicians to enter those specialities which are the most lucrative, regardless of the needs of the population.

The only feature of the book which the present reviewer would question is the rather extensive treatment of specialization among primitive tribes. It should be discussed, of course, but as Dr. Rosen himself acknowledges, it differs fundamentally from that of modern society. Primitive specialists arose for different reasons in different tribes, either as the result of a divergent view about the cause of disease,

or of a special power granted by the divinity, or as a result of popular approval, or a special skill in treating certain parts of the body, as e. g. the bonesetters. The latter cause is the only one which still operates in causing specialization, and one wonders whether so much space should have been devoted to a subject which has little bearing on the subsequent analysis.

GENEVIÈVE MILLER.

HARRY S. MUSTARD, *Government in Public Health.* New York: The Commonwealth Fund, 1945. 219 pp., $1.50.

This volume is a monograph in the New York Academy of Medicine's series on Medicine and the Changing Order.* It is a friendly critique of the administrative structure, functions, and background of contemporary public health work in the United States. It is the account not primarily of an historian, but of a seasoned public health administrator who views historic developments largely in terms of whether or not they have created practical administrative problems for the down-to-earth health officer in 1946.

Doctor Mustard's book gives a succinct account of the content and relationships of public health programs in federal, state, and local governments. The constitutional basis of state sovereignty is carefully described and its practical significance in public health affairs. The varied health functions in the federal government are discussed, with a robust emphasis on their lack of coordination and unity. Functions and expenditures of state health agencies are delineated. Considerable attention is given to the content of public health work in the counties and municipalities of the nation, the role of voluntary agencies, the background of the specific functions that make up the conventional pattern of the modern public health program. With a view to current trends careful attention is given to the meaning of the "public health district," consisting of an amalgamation, under varying arrangements, of adjacent county or township jurisdictions. All the way through, Doctor Mustard is critical of inadequacies in present public health organization, candid in pointing out how far short it falls of desirable standards.

A central theme in the account is that, since the origins of official public health organization in the United States, there has been a trend towards increasing federalization, a trend which in the last few decades has become greatly accelerated. At the same time there is a broadening assumption of responsibility by government for the welfare of all persons, not merely the poor. Doctor Mustard attaches much significance to the fact that vaccines are distributed by health departments without a means test and that the blood of a poor man and a rich man alike may be tested, without charge, in the same public health laboratory. In this, he suggests, lies the germ of the idea of health department participation in programs of medical care for the general population.

It is regrettable that Doctor Mustard does not carry this thought further, that, in fact, he feels it is outside the province of his study. There is probably no more

* Statements expressed in this book review are the author's own and do not necessarily reflect the views of the U. S. Public Health Service.

significant development in health administration today than the growing pressure for health department cooperation in programs of organized medical care. While, as Doctor Mustard points out, general medical care administration had its main origin in welfare departments, it is moving into the bailiwick of official public health as surely as has the field of industrial hygiene passed from the aegis of labor departments to that of health agencies. The programs of medical care under health department auspices, serving aged persons in the state of Washington or welfare recipients in Maryland, are just two illustrations of the trend.

A somewhat greater appreciation of the significance to public health of programs of health insurance and related measures of organized medical care might have led to a more complete inventory of federal "public health and medical care" programs. An agency that has provided leadership in the formulation of the most comprehensive national health legislation ever proposed in the United States and another agency responsible for the only operating, government-sponsored program of health insurance in the current period—a program including prepayment plans for low-income farm families in about one out of three counties in the nation—are both omitted. The former is the Social Security Board in the Federal Security Agency, and the latter is the Farm Security Administration in the Department of Agriculture, not to mention the federal program of comprehensive medical care for migratory farm workers of the Department of Agriculture's Office of Labor. The medical care program for the wives and infants of servicemen (Emergency Maternity and Infant Care program) would likewise seem to warrant an evaluation that recognizes more fully its role in providing health departments experience in medical care administration which they will probably need desperately in the years ahead.

Doctor Mustard's evaluation of the Children's Bureau, the agency of the E. M. I. C. program, is pragmatic rather than historical. He says, "Administratively, it would probably have been better had it never been born. Practically, and as a working agency, it has rendered a magnificent service in directing attention to maternal and child health and in getting something done about it." The point is, of course, that history moves in accordance with the "felt needs" of the hour and the way that men or groups respond to them. Rather than having regrets because the Department of Labor responded to the challenge of better hygiene for mothers and babies, one might wonder why the principal federal health agency failed at the time to respond to the challenge. Current discrepancies in federal health administration reflect the uneven development of our recognition of different health problems; they do not imply that the benefits actually rendered would have been any greater if the developmental path had been otherwise.

Not that Doctor Mustard spares the United States Public Health Service from scrutiny. His account of the humble and more than a little chaotic origins of the marine hospital system, with a presentation of Alexander Hamilton's original report to Congress in 1792 proposing the idea, will shatter the illusion of some. Yet one wonders if the operation of a program of compulsory health insurance in the United States in 1798 does not have more historic significance, in present-day health insurance perspective, than Doctor Mustard allows. We may recognize that the health insurance movement in contemporary America has had its development along the path from Bismarck in the Germany of 1883, more than from the

limited program for seamen and sailors launched at the birth of our republic. There still remains, however, the essential relationship of an "anticipated empiricism"—a common solution based on experience with a problem faced by our predecessors 150 years ago as it is faced by us today. While the situation in 1946 may not stem directly from that in 1798, they both stem from a common trunk—the need of groups of people for medical care of which they cannot be assured on an individual basis.

Government in Public Health is to be applauded for its frank admission of the over-all weakness of official health agencies at state and county levels, its recognition of the small place held by the health department in the arena of most local government. Yet, one of the chief—if not the most important—reasons for the deficiency is given only scant attention. It is the restrictive effect on health activities of the tendency of public health officials to seek their chief support from private professional groups, rather than from the great mass of the public. As Doctor Mustard points out, organized medical interests at the national level have opposed, throughout the years, not only programs of governmentally sponsored health insurance but even federal grants-in-aid to the states for maternal and infant hygiene. The closer one gets to the grass roots, the more public health officials are found to be guided in their actions by what they think will or will not alienate the private medical profession. With this as a governing motivation, backing has seldom been sought from the 98 per cent or more of the population who represent the chief consumers of medical care or public health services. The inclination of state legislatures to appropriate relatively ample funds for public highways or public buildings has as its basis this kind of support from the people who cast the votes. It is surely questionable whether our public school system, despite its inadequacies, would have reached its present state of development if its builders had sought their chief support from the proprietors of private or parochial schools. There are encouraging signs that public health leaders are today recognizing this fact, and accordingly there are prospects of an expansion of public health activities out of all proportion to the confines of the past.

Doctor Mustard defends official health agencies in their relative neglect of organized action in such major fields as the control of heart disease or of cancer largely in terms of the backwardness of our technical knowledge of these diseases. With the practical application of even present knowledge of the diagnosis and treatment of heart disease and cancer, however, it is a good bet that health departments could be far more effective in saving lives and reducing human suffering than is now the case with perfectly top-notch performance in smallpox vaccination or restaurant inspection. It is not that the latter are unimportant, but rather that the former are vastly more important. The pressure of vested interests, that enforce a barrier between the treatment of disease and nineteenth century notions of disease prevention, is doubtless a greater obstacle than gaps in technical knowledge.

The finest contribution of Doctor Mustard's monograph is his elaboration of the changing concept of state governmental authority for the organization of local health departments. Starting with the granting of optional rights to organize boards of health, state legislation has gradually extended through stages calling for mandatory boards of health and mandatory health officerships up to a level where health departments with full-time employees are permissively authorized everywhere. We are now at the brink of a final stage, as Doctor Mustard sees it, in

which ample health departments would be mandatory everywhere by law, in the way of school systems. Doctor Mustard makes a plea for a united federal-state-local effort for improved public health organization. In his program, federal public health grants to the states would be contingent on the organization of effective health departments covering every local jurisdiction of a state; meanwhile states would require the establishment of public health agencies in all jurisdictions and local government units, where necessary, would take steps to combine with adjacent units to form effective health districts.

Doctor Mustard's positive personality shows through the volume at every page, displaying the lessons deeply learned from the vantage-point of the practical health administrator. Despite his sobriety about the present status of public health organization, he views the future with confidence. He finds that "the changing order" is exerting its inevitable influence on the field of public health administration and he seems glad of it.

MILTON I. ROEMER.

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